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PASSIVE 19.3 GHZ RADIOMETER AND AEROSOL DATA FROM THE NORTH SEA--ETC(U)
AUG 80 S G GATHMAN, B G JULIAN
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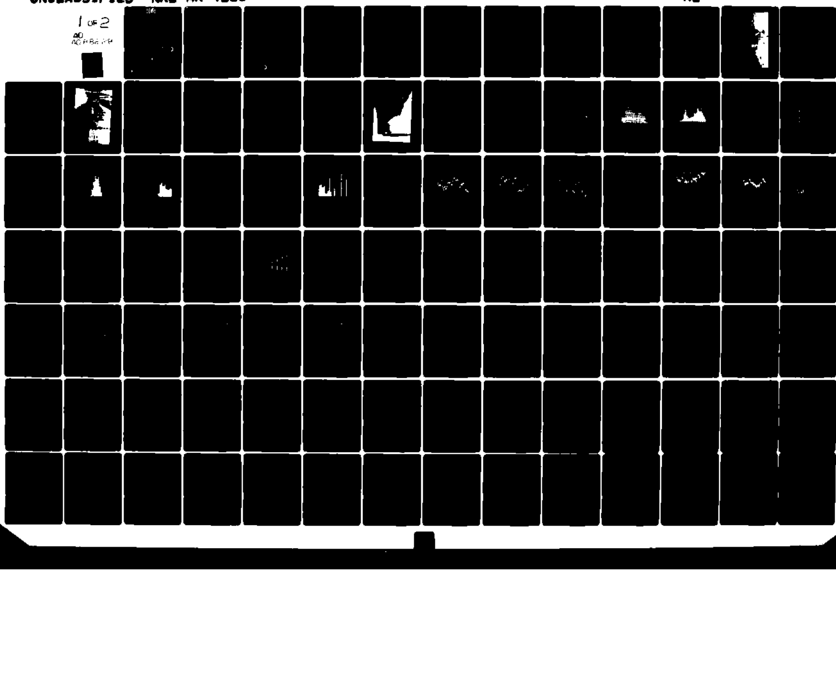

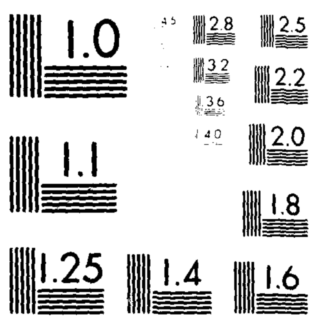


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# Passive 19.3 GHz Radiometer and Aerosol Data from the North Sea During MARSENT, September-October 1979.

S. G. [illegible] and [illegible]

Atmospheric Physics Branch
Environmental Sciences Division

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Aerosol concentrations in five size ranges with a minimum detection size of d=0.5 microns and the horizontal and vertical polarities of passive 19.3 GHz microwave radiation at various angles to nadir were obtained in the North Sea during MARSEN I in the September—October 1979 time frame. These data together with pertinent simultaneous meteorological measurements are reported on an hourly basis.

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# PASSIVE 19.3 GHz RADIOMETER AND AEROSOL DATA FROM THE NORTH SEA DURING MARSEN I SEPTEMBER—OCTOBER 1979

## 1. BACKGROUND

The truly marine atmosphere differs considerably from its continental counterpart both in its meteorological characteristics and in its aerosol composition. According to Junge, the typical continental aerosol size distribution can be described by:

$$\frac{dN}{d\,(\log r)} = C\, r^{-\beta}$$

where N is the aerosol concentration which is a function of the radius, r is the radius, $\beta$ is about 3 and C is a constant.

In the simplest terms on the other hand, the marine aerosol is made up of both a residual continental population plus an additional marine component. As an air mass leaves a continental area, for the open sea, air mass modification takes place and the continental aerosol component is decreased because most of its sources are eliminated while the sink or dissipation processes are still operating. In addition a new source of aerosols comes into play, produced by the sea itself and present in the form of minute droplets formed about nuclei of sea salt.

It is well known that the total concentration of sea salt in the marine atmosphere increases with wind speed as any visitor to the sea shore with an automobile windshield to clean will attest. There are several known mechanisms by which these

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salt particles are introduced mechanically into the atmosphere. The first is by the bursting of minute air bubbles at the surface of the water. Blanchard (1963) has shown that depending on the size and age of the air bubbles, small jet drops can be ejected to altitudes of tens of centimeters above the water surface. These jet drops are then evaporated down to an equilibrium size in which it will no longer evaporate nor grow when reacting with the free water vapor in the immediate environment of the droplet. As a small salt particle, this former jet drop may now be transported vertically by the turbulent atmospheric forces in the boundary layer in which it now finds itself. For the most part the air bubbles are introduced into the surface waters of the sea by the action of white caps. When a wave becomes so steep that it is no longer stable, its crest in the process of falling back into the water entraps a volume of air which quickly breaks up into many small bubbles [Blanchard and Woodcock (1957) & Monahan and Zietlow (1969)].

A secondary source of extremely small droplets observed in the action of the bursting of air bubbles at the sea is the film droplets which are the residue of the bubble film remaining suspended as the film bursts just prior to the ejection of the jet droplets.

The film droplets are about two orders of magnitude more numerous than the jet droplets and they are considerably smaller

in size than their cousins. However they are not mechanically placed in the turbulent zone and their effect on atmospheric aerosol concentration is not well known.

A third source of aerosol occurs at wind speeds higher than those associated with the onset of whitecapping. This process produces droplets by the wind mechanically shearing off the wave crests [Blanchard, (1974)]. Many of these resulting droplets strike the sea surface downwind of the crest of their origin and in the process produce many additional droplets and bubbles [Harlow and Shannon, (1967)].

Once introduced into the atmosphere, the growth and evaporation of the droplet depends on the chemical characteristic of the droplet water and its salt content. If the droplet were evaporated down in a desert environment it would eventually reach a minimum dry size. At higher relative humidities it will grow to larger sizes because of the hygroscopic salt of the nuclei attracting water molecules even at relative humidities less than 100%. Of course if the relative humidity reaches 100% the growth will be spectacular. The aggregate result of many droplets reaching this rapid growth stage is the phenomenon of fog.

The characteristics of the variability of size as a function of relative humidity of the hygroscopic portion of

the total aerosol in the marine atmosphere is extremely important when we are concerned about the transmission of electromagnetic radiation of near optical wavelengths in the Navy. This is because of the scattering interaction which occurs when the electromagnetic radiation wavelength and the particle sizes are equivalent.

There are at present no satisfactory way of predicting precisely the size distribution of the aerosol as a function of altitude above the sea surface nor are there techniques to obtain this information from a remote sensor.

It has been shown [Droppleman, (1970)] that the emissivity of radiation at microwave wavelengths is strongly affected by the presence of white water or bubbles at the sea surface. If the percentage of the total sea surface covered by white caps can be measured remotely by a microwave technique, then the possibility of remotely monitoring the source of the marine aerosol from aircraft or satellite is achieved. Consequently with the aid of an appropriate boundary layer model utilizing this information the size distribution of atmospheric aerosols can be determined at various altitudes. This model requires as an input information on the flux of droplets produced at the sea surface which are injected into the lowest layers of the turbulent boundary layer and mixed throughout the boundary layer by eddy diffusion processes. This type of

sensing would be useful for the high wind regimes where our knowledge of aerosol loading is particularly scanty.

MARSEN I was a cooperative experiment between European and American scientists designed to study the interaction of surface winds, waves and currents using in-situ and remote sensors. The measurements were carried out in the German Bight around the Island of Helgoland, the German North Sea Platform and the Island of Sylt.

It was the purpose of this part of the experiment to investigate the production and distribution of various aerosols by greatly expanding our measurement capability in utilizing the various measurements being made at the sea surface by experimenters from many countries. Thus by extending the suite of instruments, taking part in the large scale MARSEN I experiment to include measurements of specific interest to the problem of marine aerosols, we gain significant leverage in obtaining a sufficiently broad experiment at reasonable cost to provide specific data to be used as input data to the first order mixing model and as "ground truth" aerosol content data to be used in the testing of the model predictions themselves.

This experiment provides complementary information on the mechanism of maritime aerosol generation as well as an analysis of the utility of satellite derived data on sea

surface properties. It is hoped that the use of this complementary study of aerosol generation by white caps, the resulting aerosol size distribution in the marine boundary layer and the feasibility to derive aerosol generation rates from microwave radiometric data from the SMMRs' of either aircraft or NIMBUS G will provide the ground work for an even greater application of remote sensing techniques in the study of the meteorology of remote sections of the worlds oceans.

Figure 1 shows the location of the Forschungsplattform Nordsee (FPN) located in the German Bight portion of the North Sea on which the data reported in this report were observed. The tower is located at approximately $54^{\circ}$ 42'N and $7^{\circ}$ 10' E.

Figure 2 is a photograph of the tower from the air showing a helicopter landing on the helicopter deck to transfer material and personnel to the tower. The tower is a well equipped and comfortable scientific laboratory providing an excellent solid base for many different experiments involving the sea and its interaction with the air.

## 2. INSTRUMENTATION - AEROSOL MEASUREMENTS

The aerosol data in this report were obtained with a Royco model 225/241 aerosol particle counter with a model 518 data interface. This instrument is designed to count particle

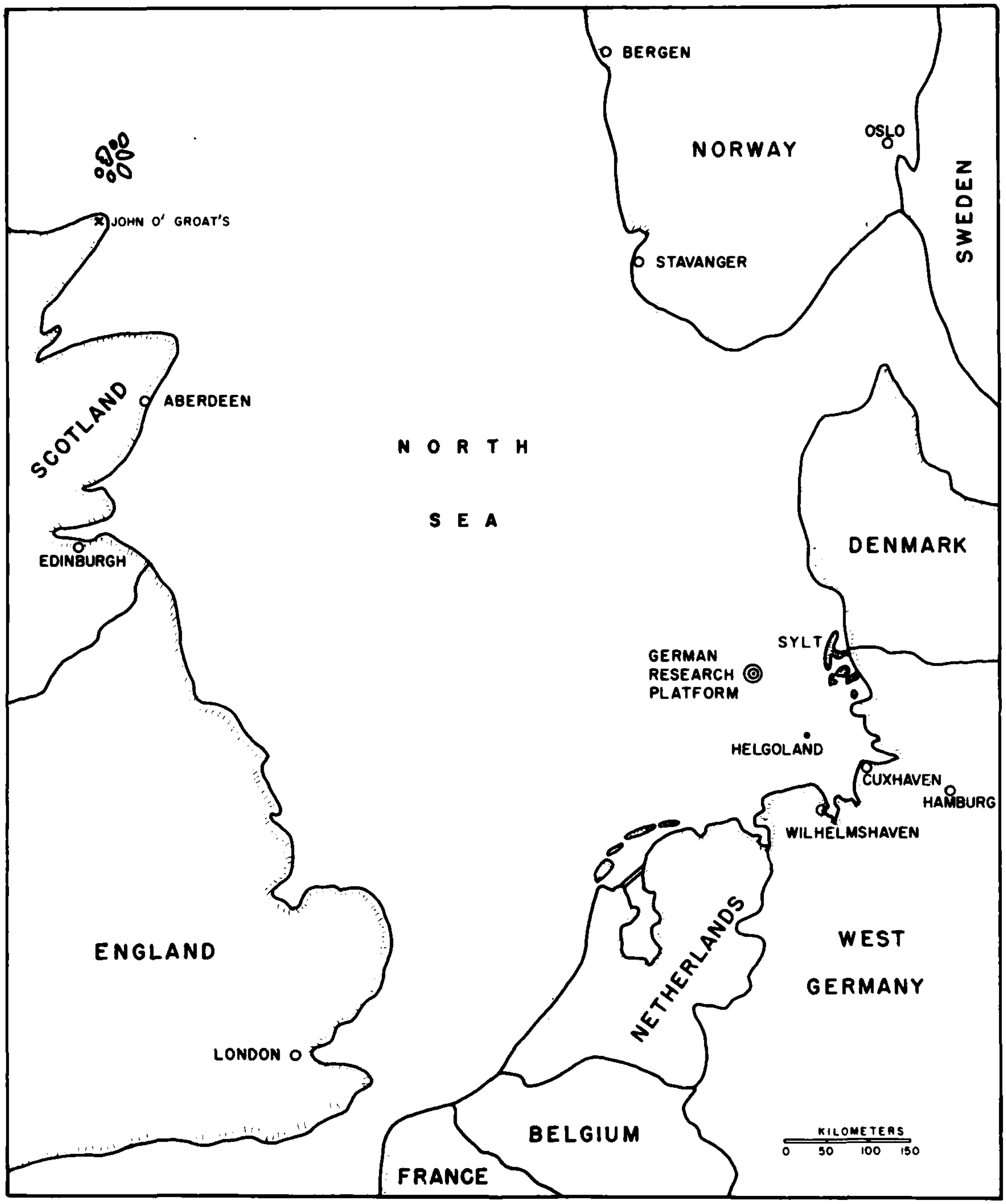


Fig. 1 — German research platform location

Fig. 2 — German research platform — North Sea

concentrations in a gaseous media. The counter will measure particles of 0.5 micron diameter and larger concentrations of up to 3500 per cc. and sort them into five adjustable size classifications counting into memories of all five channels simultaneously. The manufacturer claims a sizing accuracy about the stated size of $\pm$ 5% - based on the pulse height measurements.

The interface device was connected digitally to a microcomputer system which received the total counts of all five channels for a period of one minute. The microcomputer system provides both an immediate analog strip chart recording of all five channels in the form of histograms as well as a magnetic cassette recording of the data to provide a digital format from which to retrieve the data, for later manipulations in the analysis of the experiment.

The microcomputer system also allows for notes to be inserted by hand into the data stream to allow the coordination of the system with the rest of the experiment. The sensing head and the Royco control electronics can be separated from each other.

The air flow entering the sampling chamber was calibrated in situ with a Fisher Mark III flow meter. This calibration showed that the Royco operating at the 0.1 CFM setting was in reality only sampling 0.09677 CFM. This correction is applied

to the calculations of aerosol concentrations.

The data was analyzed later from the magnetic tape cassette. The data presented in this report is a subset of the total data available and consists of the ten minutes of available data about the hour which is averaged and presented as the aerosol concentration at that hour.

The sensor was located in a weatherproof box with an inlet tube which could be rotated to face into the wind. The sensor enclosure was located on the outside of the catwalk surrounding the tower as shown in figure 3. Because of the physical inability to get adequately far from the tower the wind direction must be taken into account in the interpretation of the aerosol data. In general when the wind direction is from $180^{o}$ to $360^{o}$ the aerosol sample is unobstructed and the data should be representative of that over the free North Sea waters. On the other hand, when the wind direction is from $0^{o}$ to $180^{o}$, the data is suspect and should not be used as the sole basis on which to make important conclusions.

The instrument was operated continuously day and night from the late evening of 13 September 1980 until mid morning of 13 October 1980. The hours of operation are shown in figure 4 where the darkened squares represent data available in the data base.

Fig. 3 — Aerosol measuring instrument (on left)

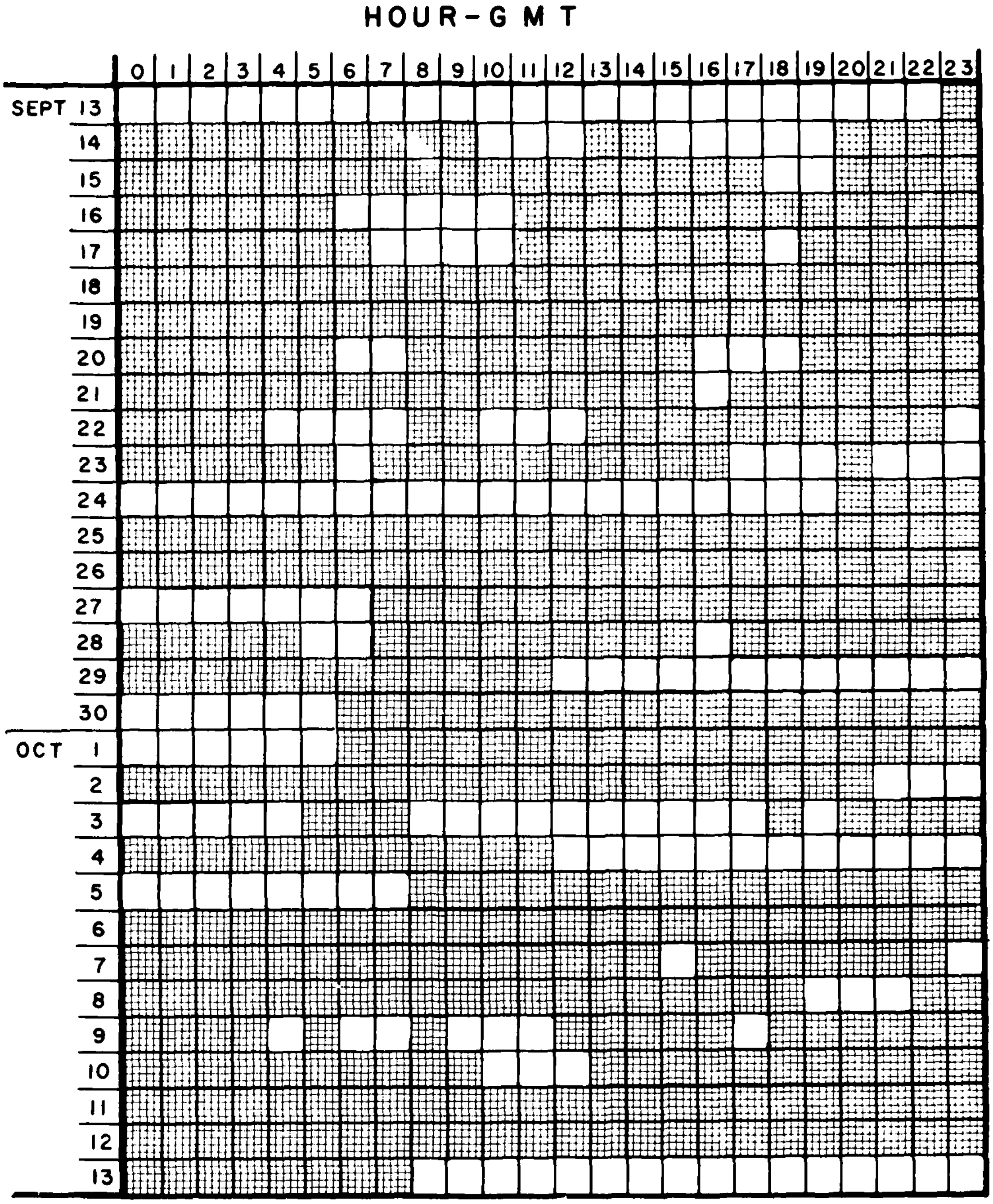


Fig. 4 — Aerosol instrument — hours of operation (indicated by darkened squares)

## 3. INSTRUMENTATION - RADIOMETER MEASUREMENTS

The second instrument, the 19.3 GHz microwave radiometer is used as an indicator of whitecaps on the sea surface. Over the past 30 years a wide variety of microwave radiometer configurations of varying complexity and sensitivity have been used. The device used in this experiment was designed by members of the Advanced Space Sensors Applications Branch of the Naval Research Laboratory Space Science Division.

The configuration of the radiometer is shown in figure 5. This device provides continuous analog outputs of both the vertical and the horizontal polarization components of microwave radiation entering the 6" aperture antenna.

The logic card operates both the electrically controlled horizontal/vertical antenna switch and the Dicke switch in such a way that both polarities of the incoming signals are compared with a reference load in a black box of a known temperature. The Gunn diode provides a heterodyning signal of an appropriate magnitude so that the amplified I.F. signal can be easily detected by the crystal detector and its magnitude processed by the logic card.

The instrument has an additional four way switch which is manually operated and allows the instrument to provide a zero reading - because in this mode both ends of the Dicke switch

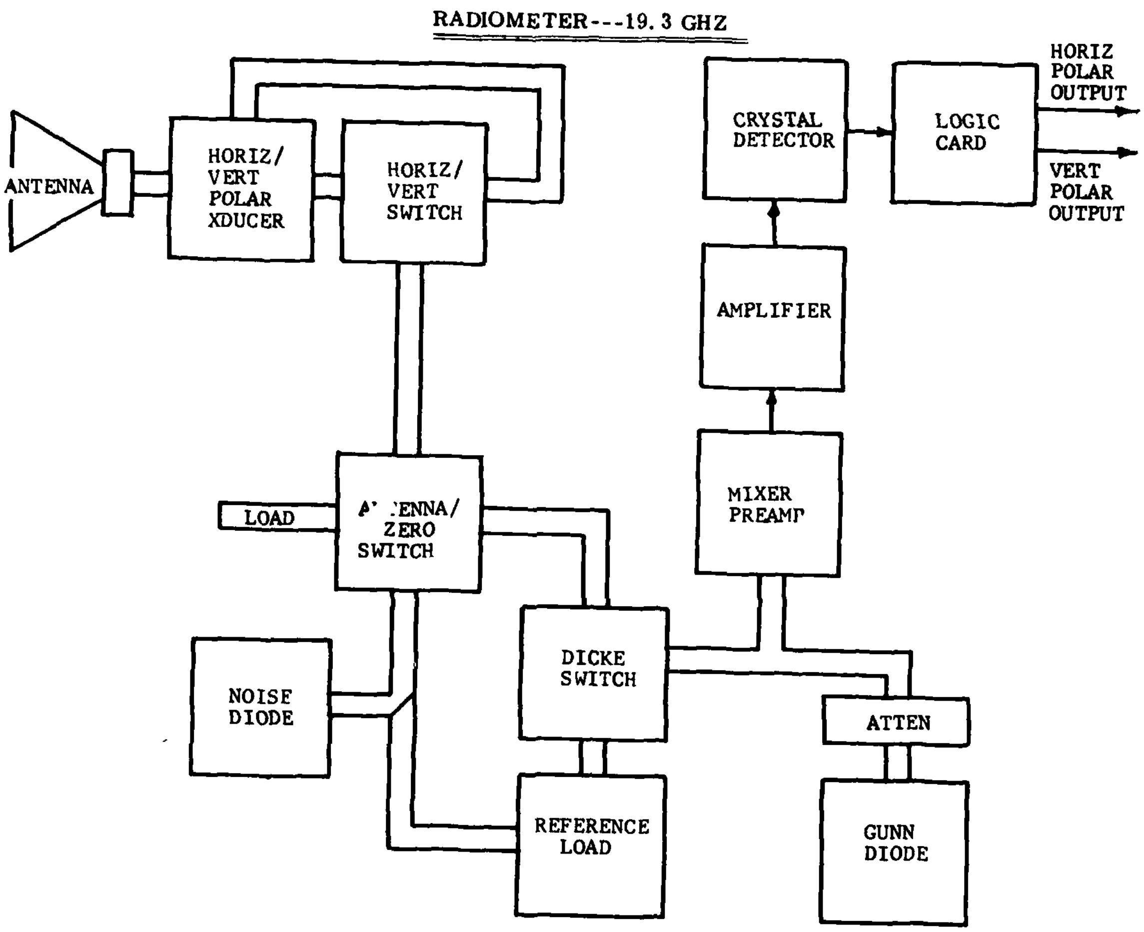


Fig. 5 — Radiometer block diagram

are looking into the constant temperature block and the differences in these signals should be a null signal. In addition, a noise diode can be turned on to provide a calibration source.

The outputs of this instrument were recorded on strip chart recorders in the high speed mode of 5 cm of chart per minute which was adequate to observe the growth and decay of individual white caps in its field of view.

The radiometer was mounted on the outside rail of the catwalk about the tower, figure 6, on a mount which allowed the radiometer to be looking at the sea surface at various angles from straight down to at the horizon. The general direction in which the radiometer was focusing was west. Throughout the period 3 or 4 times a day, high speed recordings were made at various angles with respect to the zenith. Figure 7 shows the times throughout the period when these high speed runs were made. These measurements were backed up by photographs of the sea surface taken at the same time and at the same angle during the daylight hours.

## 4. AUXILIARY MEASUREMENTS

In addition routine meteorological measurements were made by the tower personnel every hour. These measurements include the wind speed and directions, wave heights, barometric pressure, air temperature, water temperature at the depths of

Fig. 6 — Radiometer

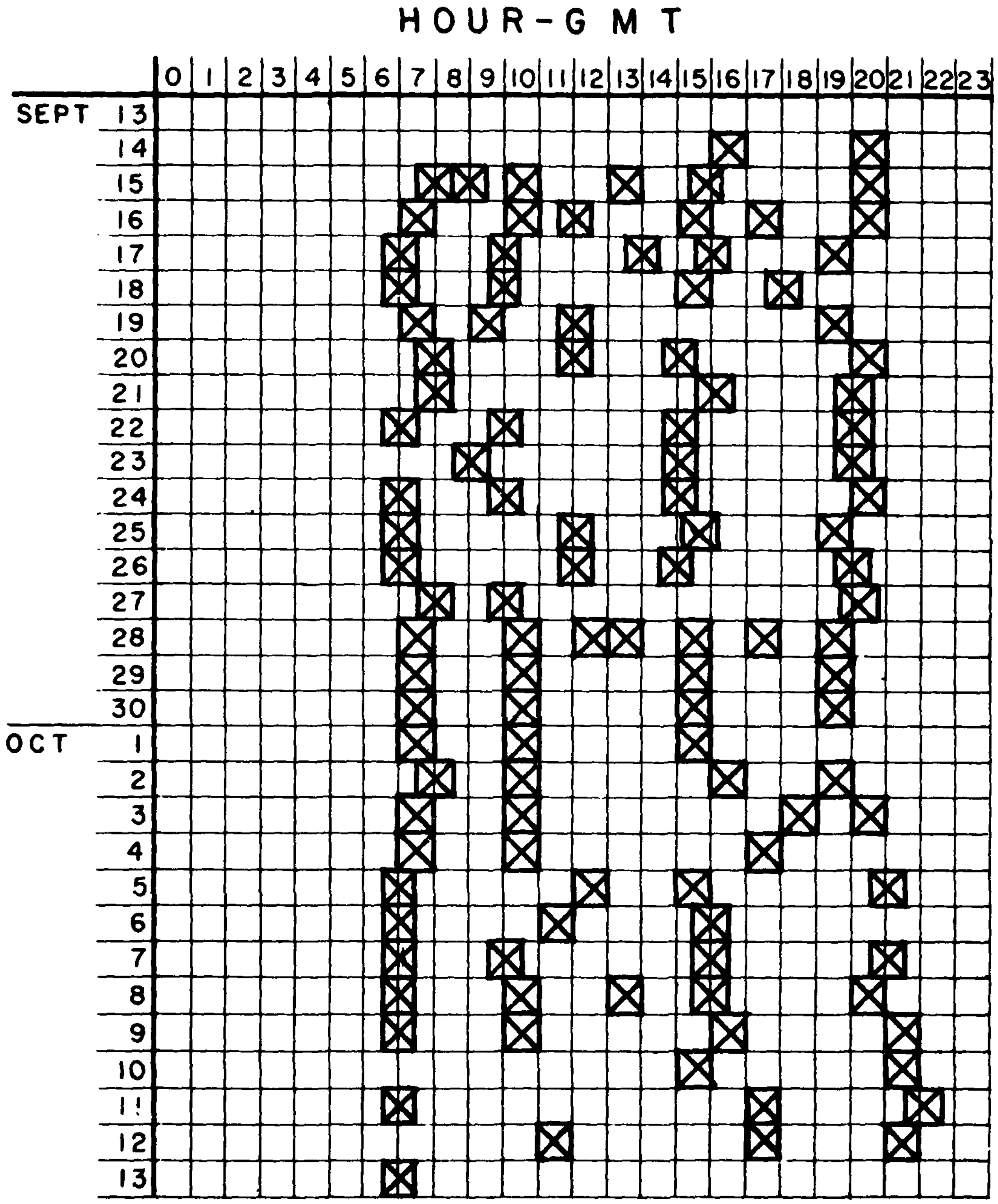


Fig. 7 — Radiometer — time of high speed data recording

4.5 meters and 19 meters, relative humidity, visibility, cloud cover and tidal measurements. From time to time when weather conditions permitted, the total aerosol loading of the atmosphere was obtained using a Voltz sun photometer. Data not reported here is available from the authors.

## 5. METEOROLOGICAL CONDITIONS

The meteorological data obtained on the platform have been digitized along with the aerosol data and put into a computerized archiving system reported by Gathman and Julian (1979). The products of this system are used to describe the meteorological conditions prevailing at the platform throughout the period of interest and hourly values are listed in appendix I.

The purpose of this experiment was to obtain data on the white cap coverage and aerosol loading at various sea states and therefore as functions of the wind speed. Because of the physical location of the instrumentation on the tower, we had hoped that there would be a good spread of wind speed data occuring at wind direction angles between $180^{\circ}$ and $360^{\circ}$. Figure 8 is a scatter diagram of the wind speed and wind direction measurments made during the operation. It is seen that the data within the permissible limits of directions shows an excellent sampling of the variations in wind speed which are needed.

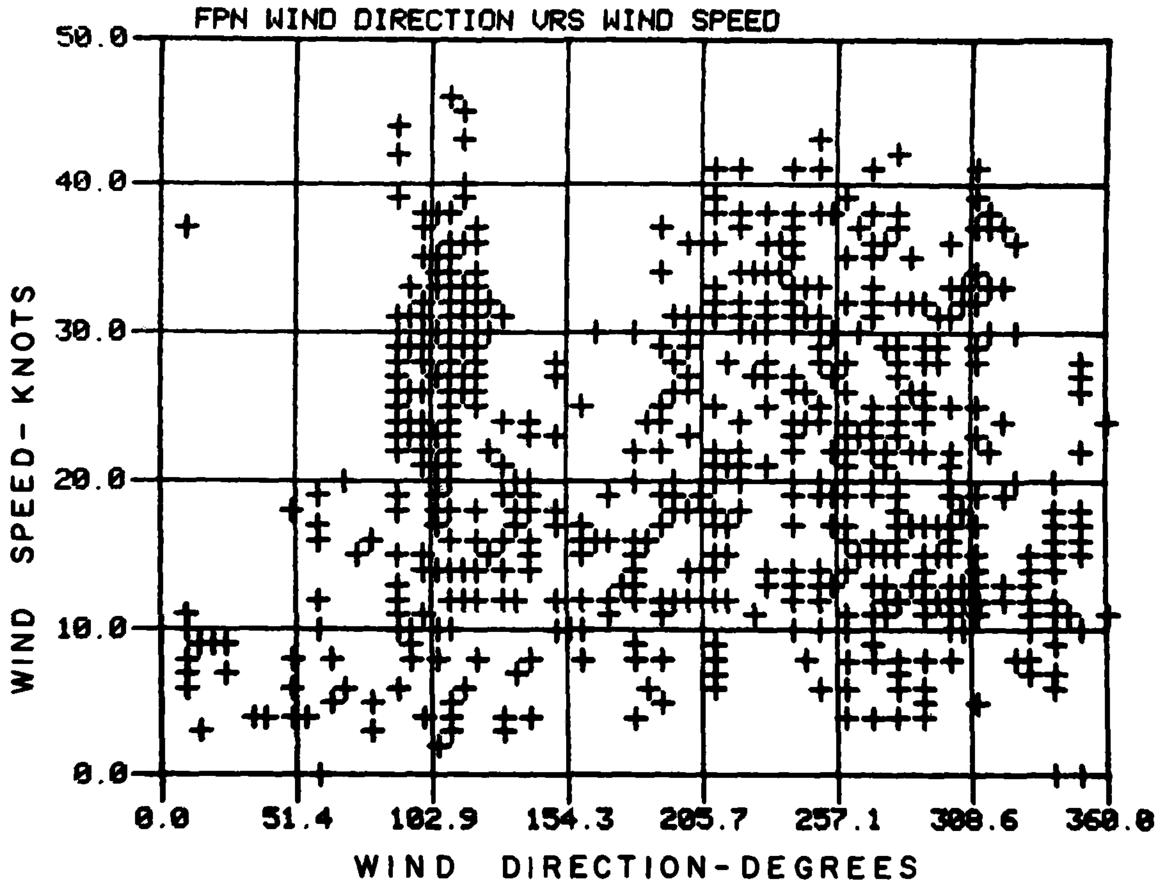


Fig. 8 — Wind direction vs wind speed

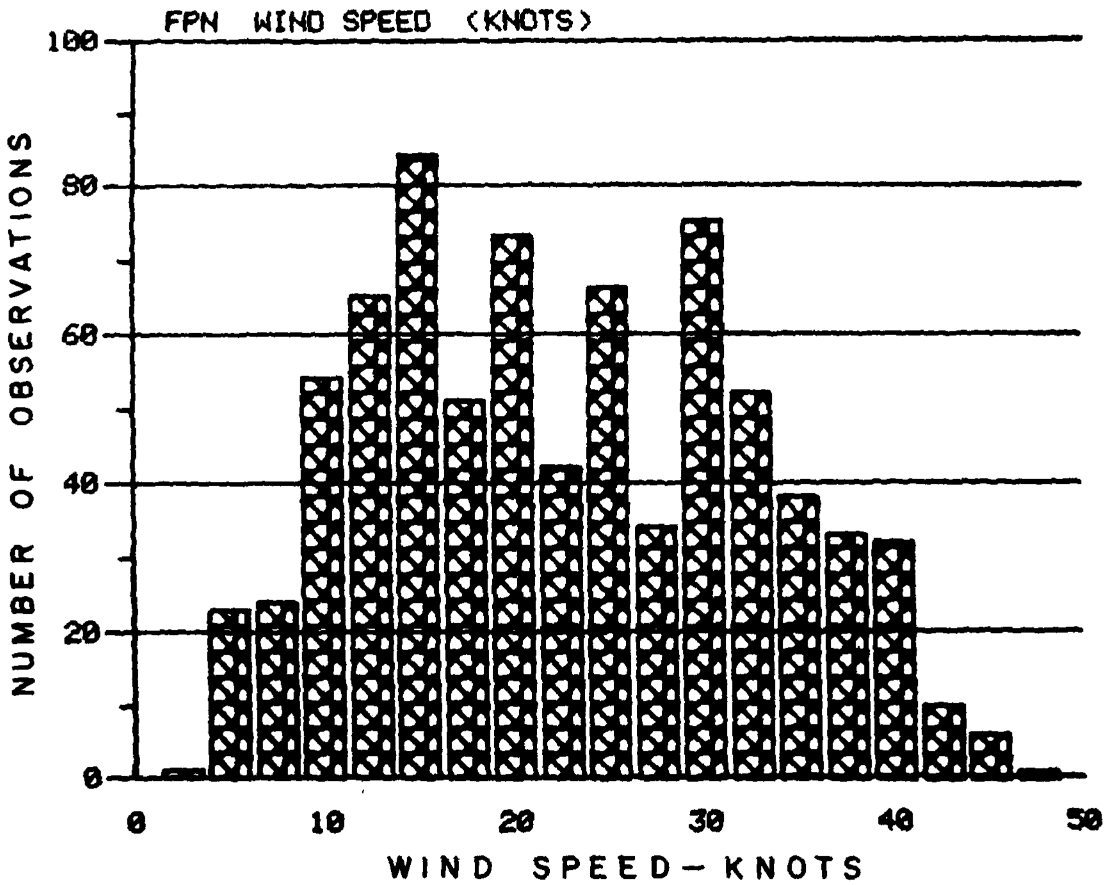


Fig. 9 — Wind speed — frequency of occurrence

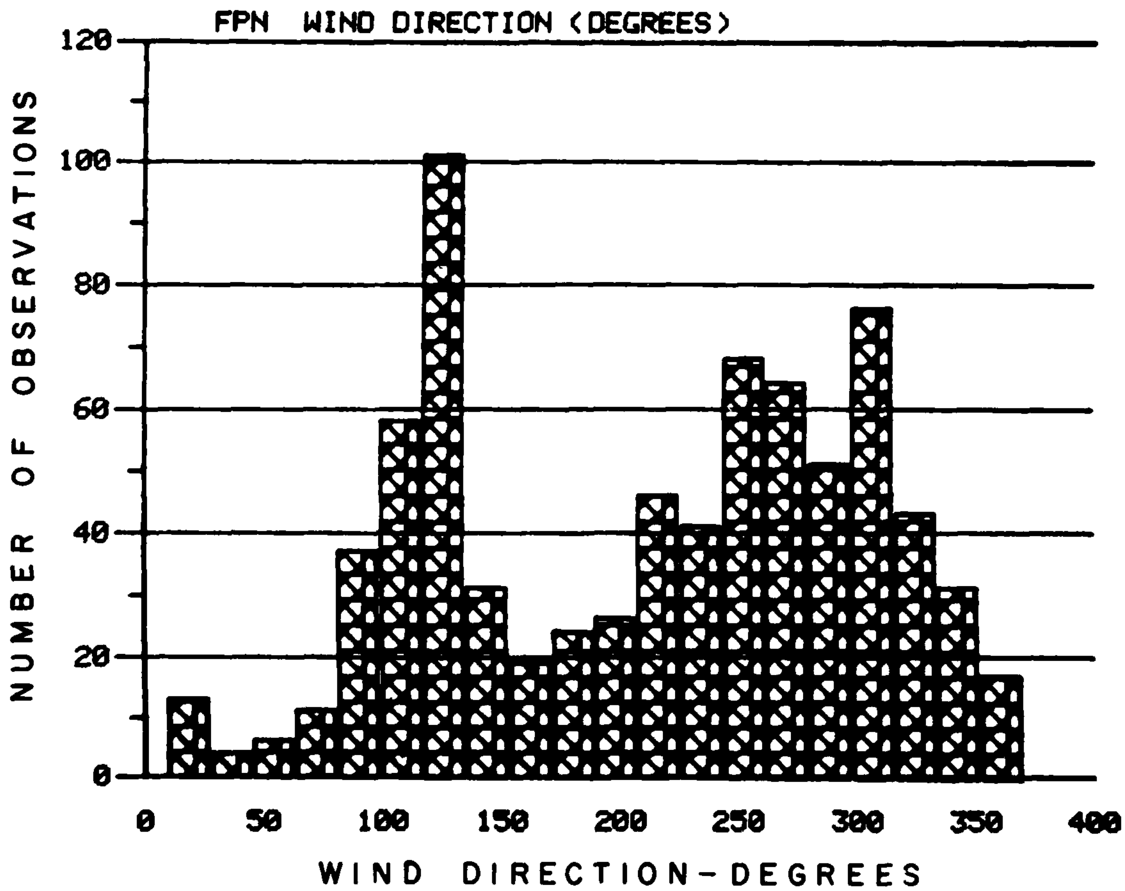


Fig. 10 — Wind direction — frequency of occurrence

In this area of good data we see that we have an almost uniform distribution of points indicating that all cases of interest are included in our data sampling.

Figure 9 is a histogram which shows that the wind speeds distribution encountered during this experiment is indeed broad and averaging about 22 knots but with extremes of 3 and 48 knots.

Figure 10 is a histogram of the measured wind directions showing that there are two preferred directions encountered during the experiment, but with the broadest peak occurring from the direction where the data is most valuable.

Figure 11 shows the frequency distribution of the wave height as measured at the platform with a wave staff. Figure 12 is a scatter plot of the wave heights as a function of the simultaneously measured wind speed. In general this figure shows that wave height does increase with wind speed but the effects of fetch and duration are not included in this figure and therefore the scatter of values is understandable.

Figure 13 shows the distribution of air temperatures at the tower during the experiment. Of more importance is the relative humidity which can cause size changes in the hygroscopic aerosol which occurs over the sea. This is particularly true for the sea salt nuclei which are produced by the white water phenomena. Figure 14 shows the frequency of occurance

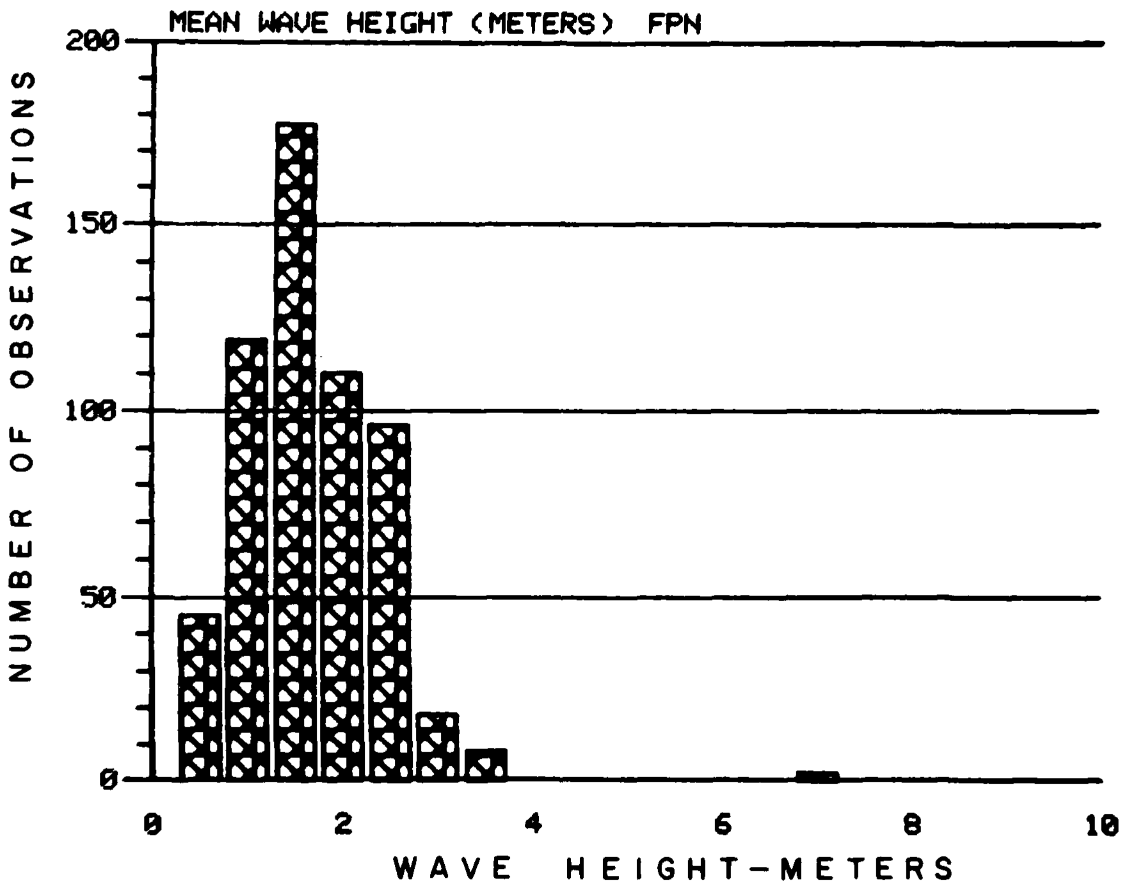

Fig. 11 — Wave height — frequency of occurrence

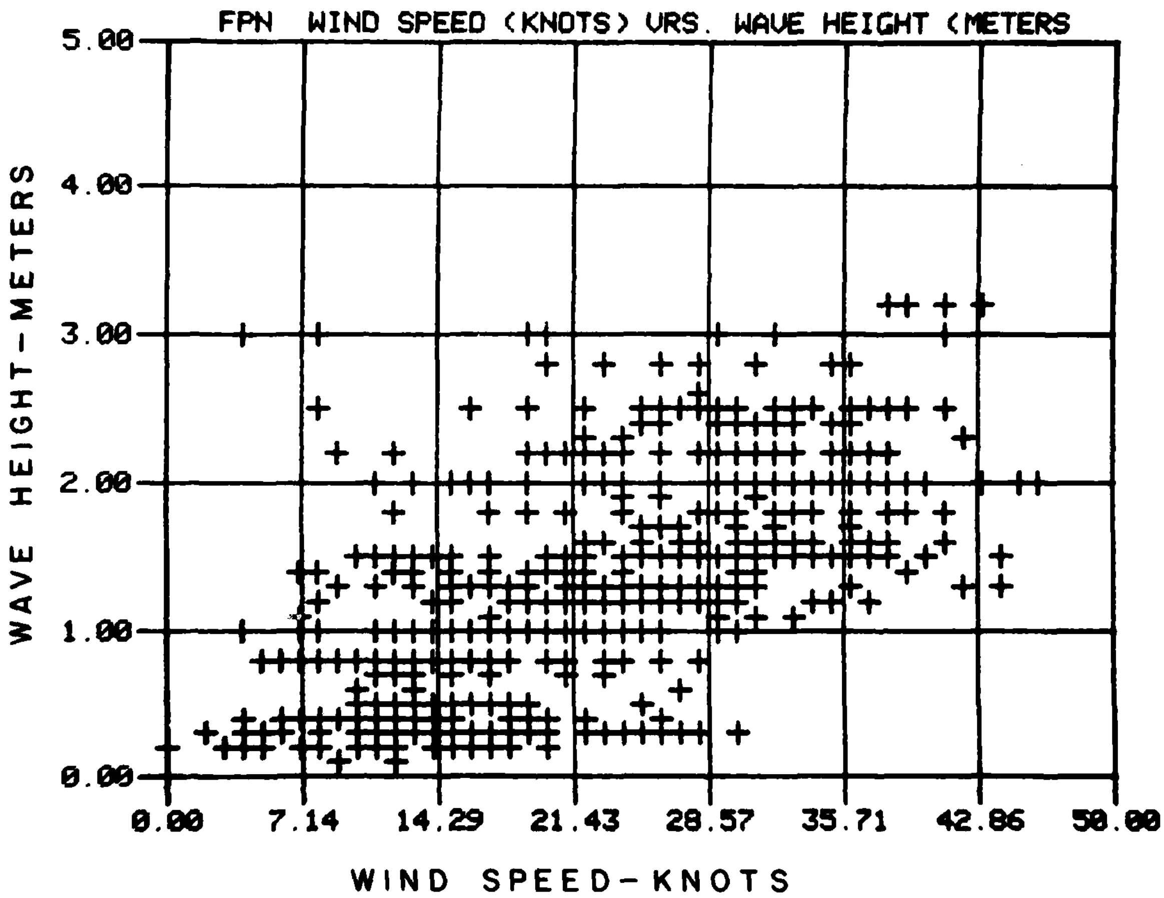

Fig. 12 — Wind speed vs wave height

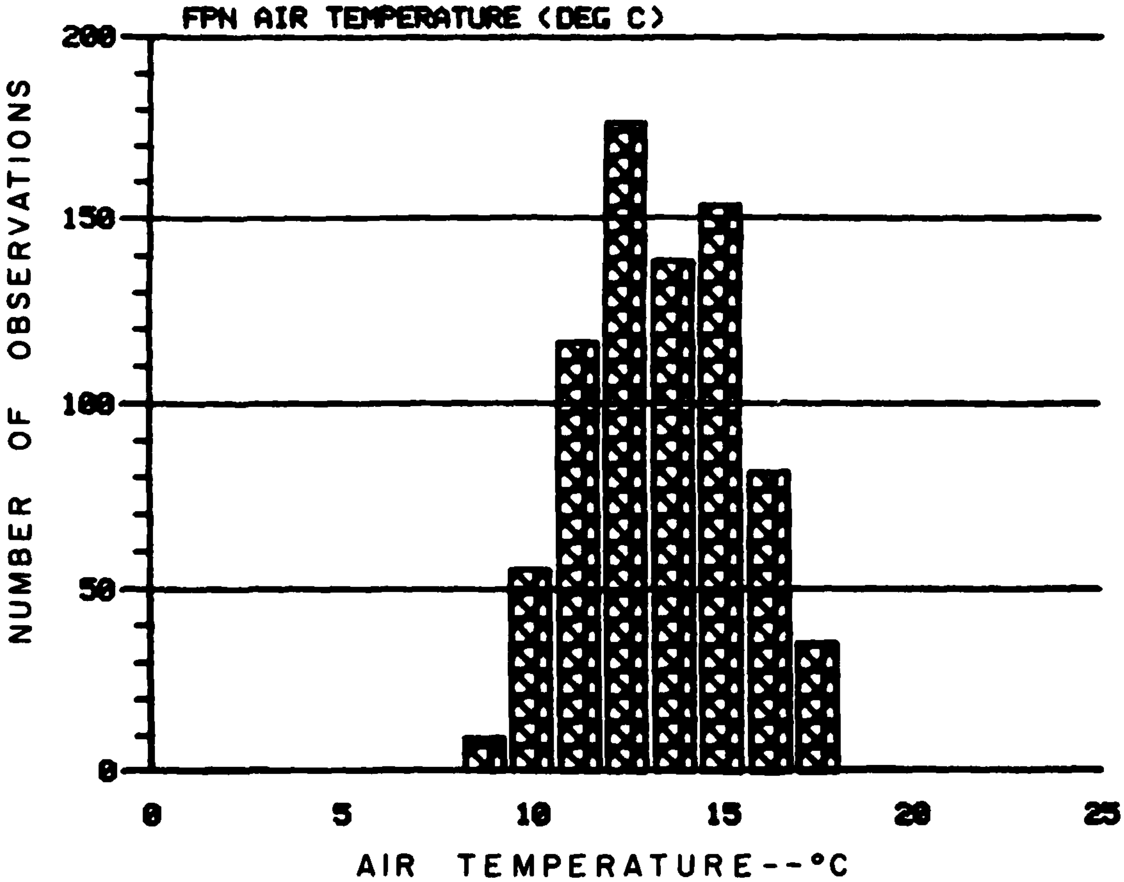

Fig. 13 — Air temperature — frequency of occurrence

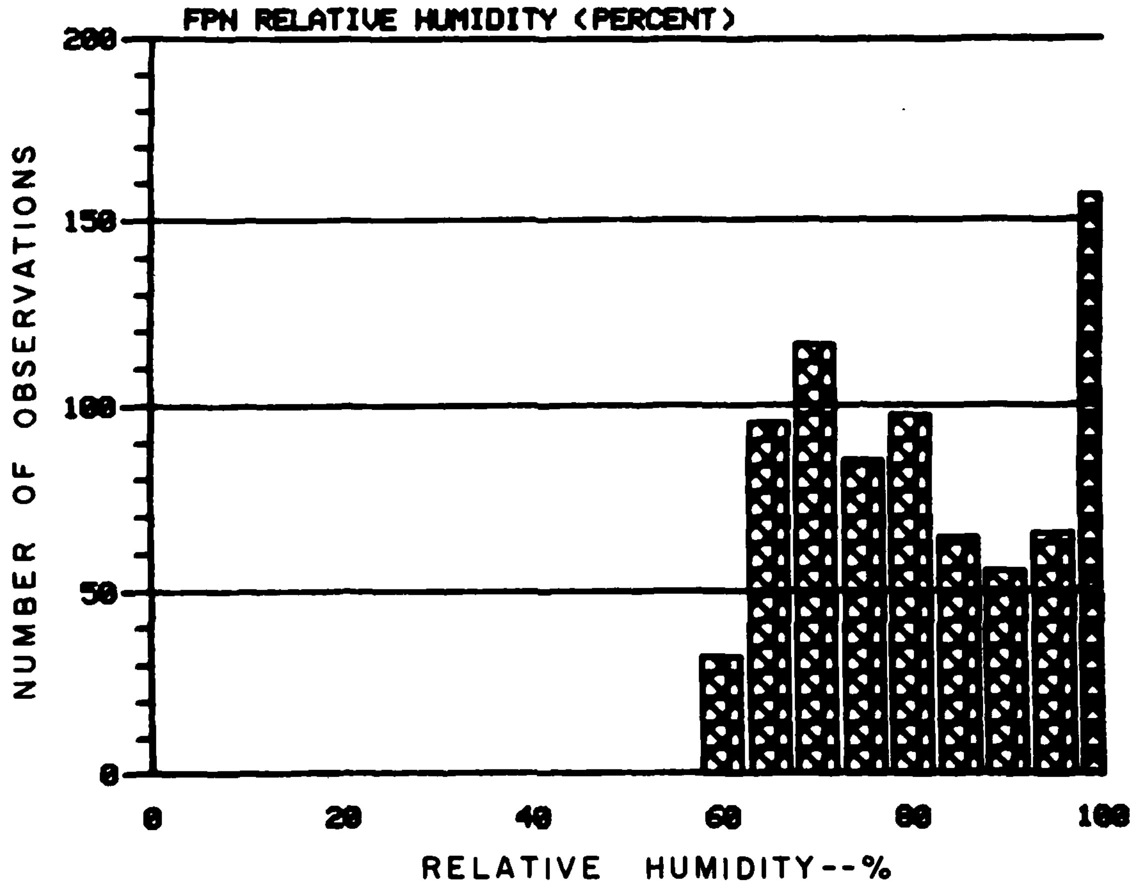


Fig. 14 — Relative humidity — frequency of occurrence

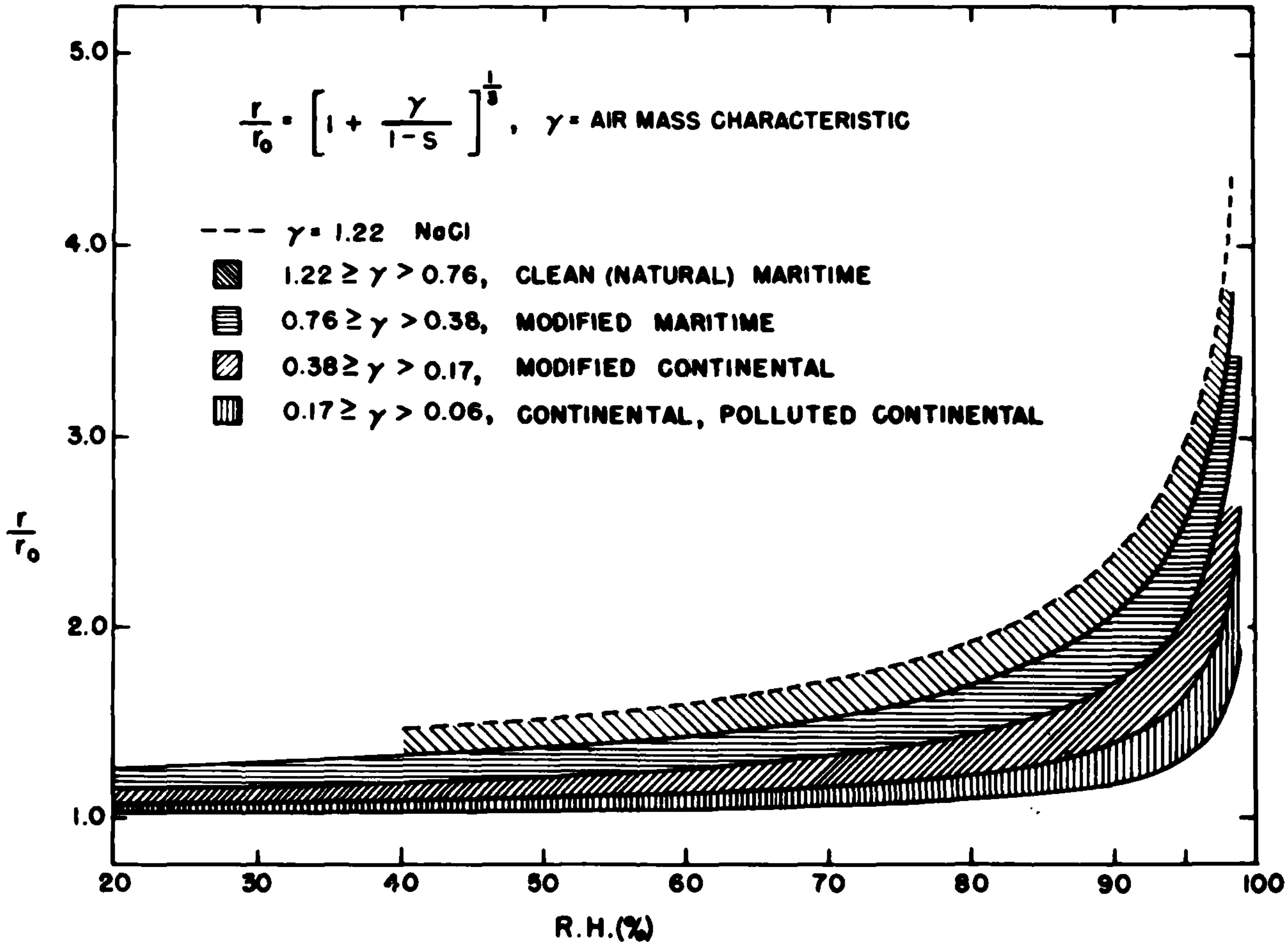


Fig. 15 — Plot of relative radii for different values of representing different aerosol types

distribution of measured relative humidities. This data shows that in 155 hours of the total time, that the air was very close to or actually saturated with water vapor. These very high relative humidities present a potential complication in the interpretations of the data because much of the hygroscopic nuclei will swell at these near saturation relative humidities. According to Fitzgerald (1978) the ratio of the aerosol radius at the ambient relative humidity to its dry size is plotted as a function of relative humidity in figure 15 for different air mass types represented by the parameter $\gamma$. (In the equations the saturation ratio, S is equal to the relative humidity in percent divided by 100.)

The accompaning visibility histogram for the experiment is shown in figure 16. This data shows that indeed most of the visibilities measured at the platform showed hazy conditions or worse - with the major part of the values being less than 12 km. Part of this reduction is no doubt due to the swelling of the aerosol as can be seen in figure 17 - where the measured mean relationship between visibility and relative humidity for the period of observation on the tower exhibit a form which is a direct consequence of the swelling of the aerosol with relative humidities above 70% which is characteristic of maritime or modified maritime air as shown in figure 15. There is a fair amount of variations about these average points however, indicating that

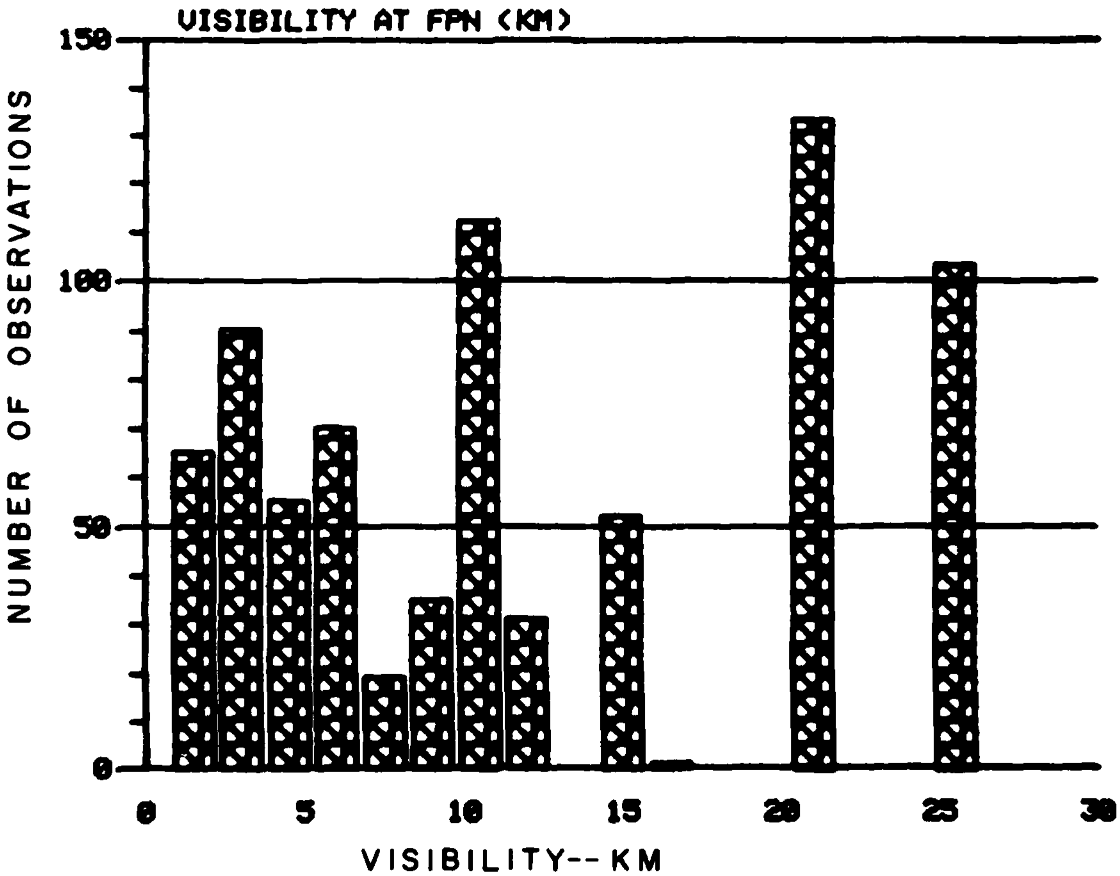


Fig. 16 — Visibility — frequency of occurrence

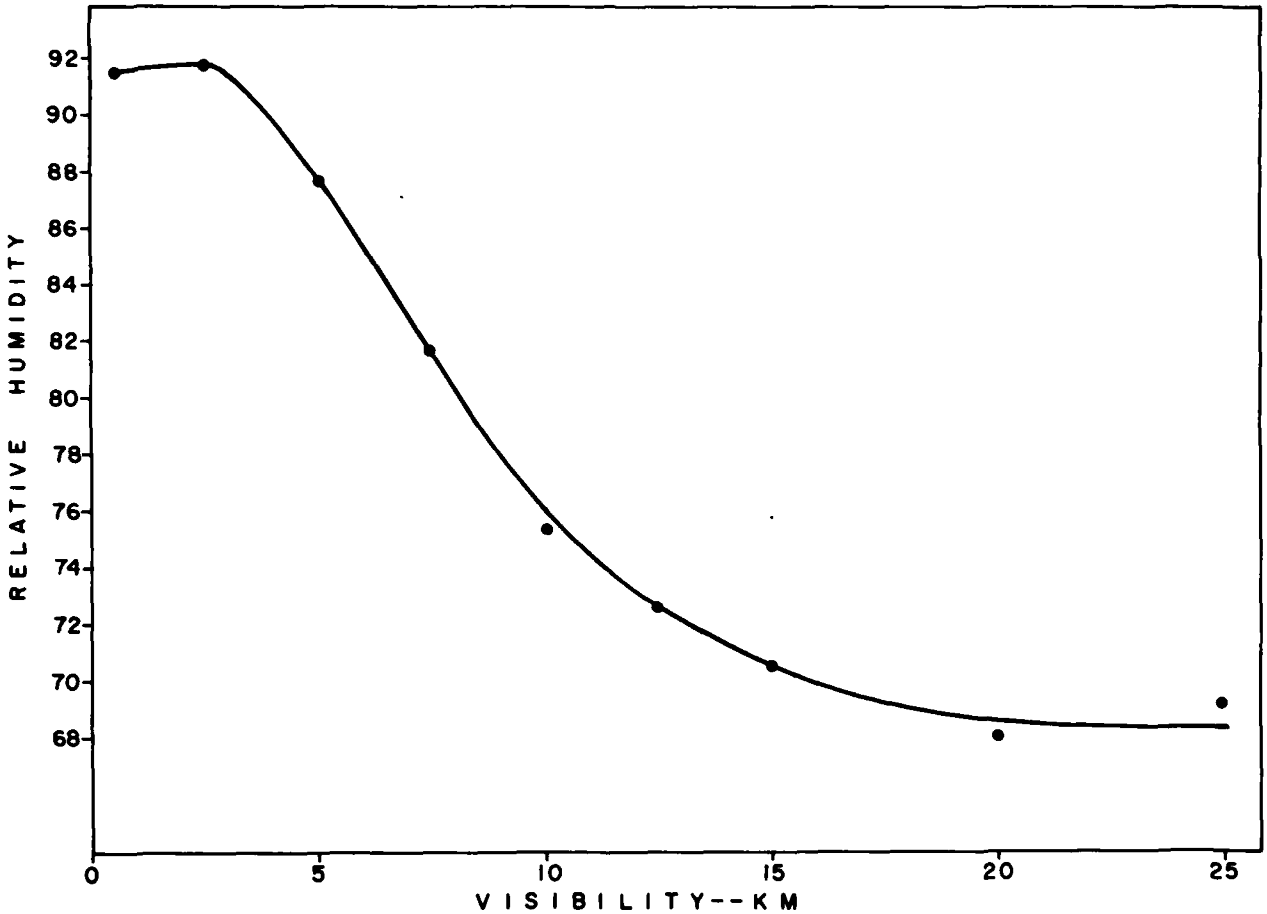

Fig. 17 — Visibility vs relative humidity

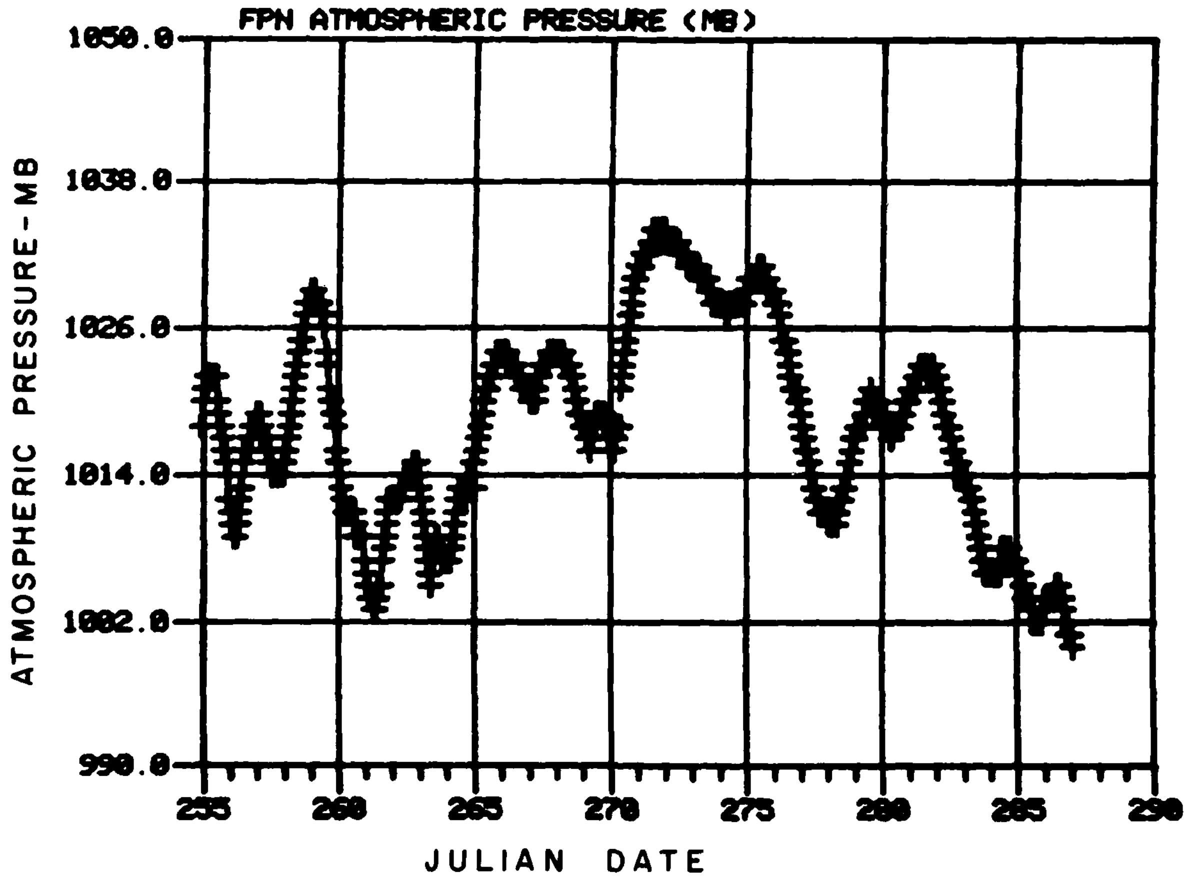


Fig. 18 — Atmospheric pressure

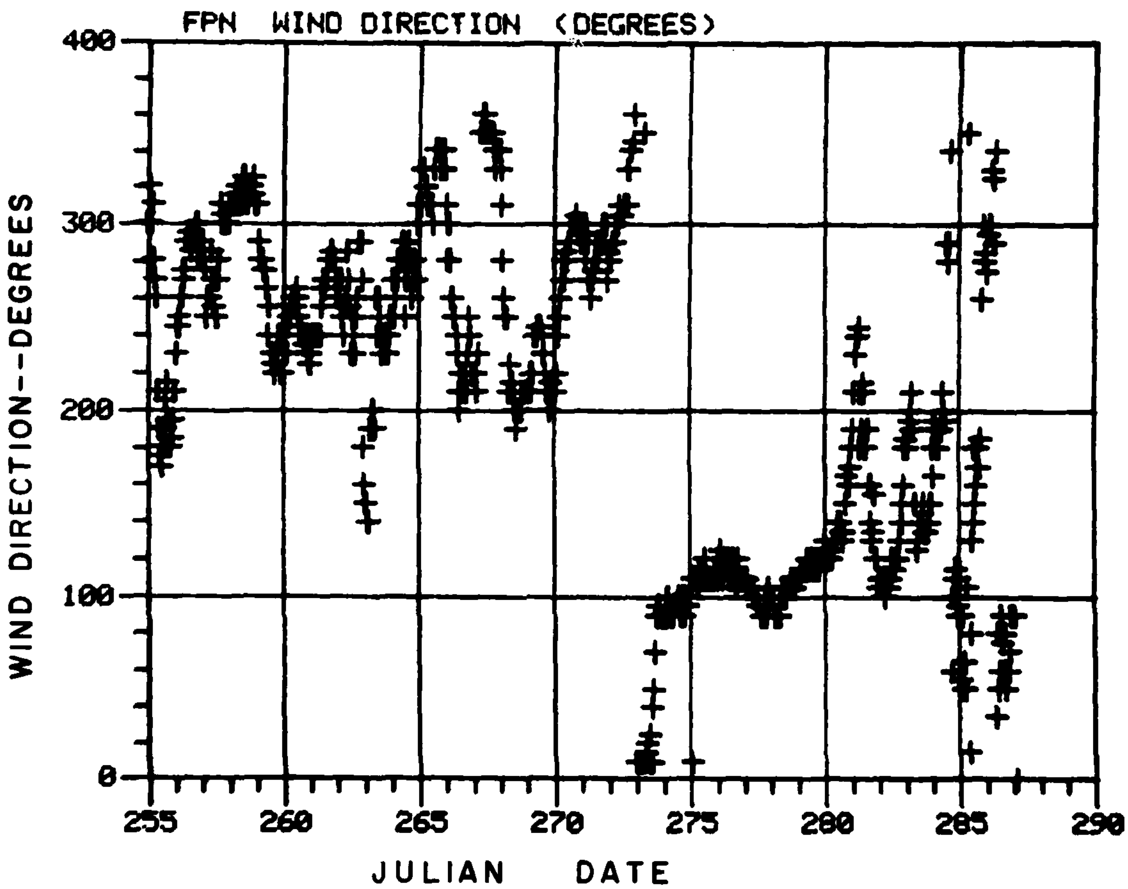

Fig. 19 — Wind direction

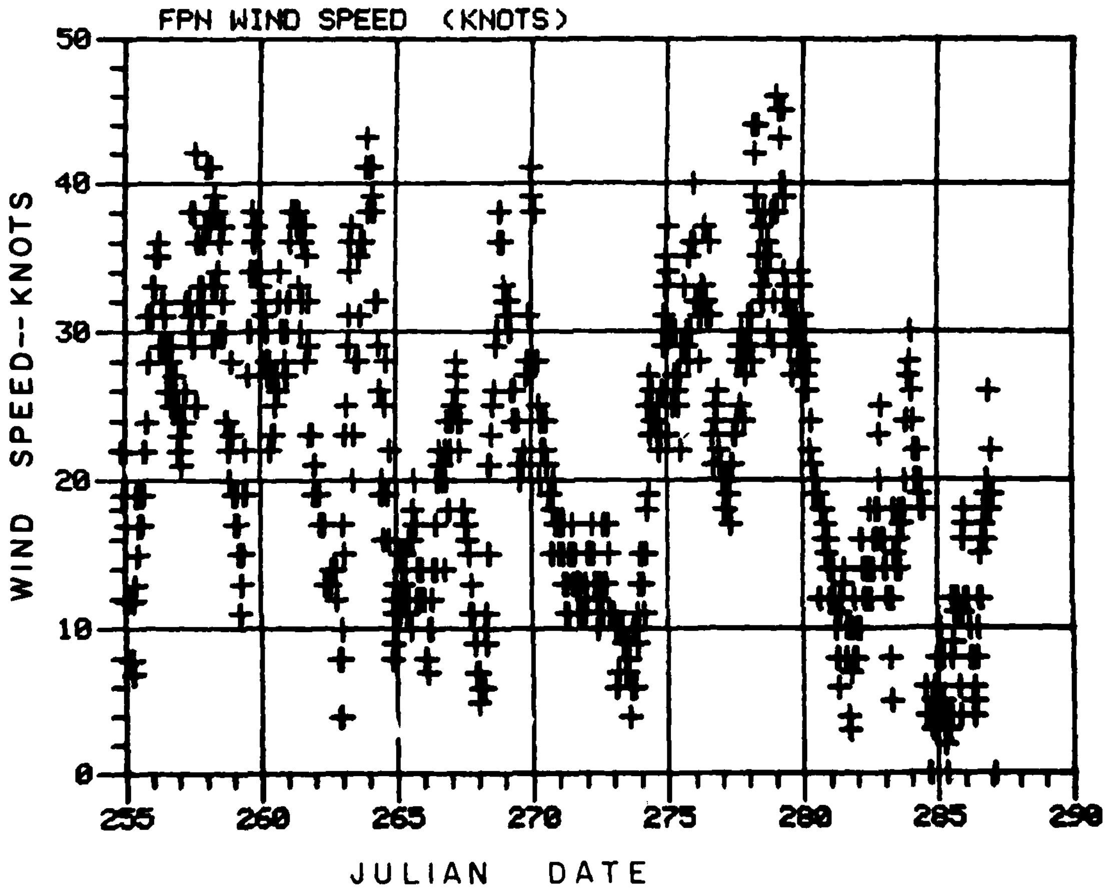


Fig. 20 — Wind speed

at any one point in time, visibility can not be estimated very accurately if all we know at that time is the relative humidity.

Figures 18 through 23 show the time variation of the various meteorological parameters for the period of observation at the tower.

Figure 18 is the variations of sea level pressure as a function of Julian Date. Figures 19 and 20 show the values of the wind direction and speed respectively plotted as functions of the Julian Date. These plots show that most of the southeasterly winds occur in a period of from day 274 thru day 281. That is from 1 October 1979 through 8 October the winds are continually contrary but in the period of time for the remainder of the experiment wind direction changed rapidly with time. The relative humidity, air temperature and visibility plotted with respect to the Julian Date are shown in figures 21 through 23 respectively.

## 6. DISCUSSION

Hourly values of the number concentration of aerosols within the size boundaries of the Royco instrument are found printed in appendix II of this report. This data shows wide variations in time with a highly significant skewness toward larger concentration values for all size classes. As discussed before these larger concentrations can be explained by two

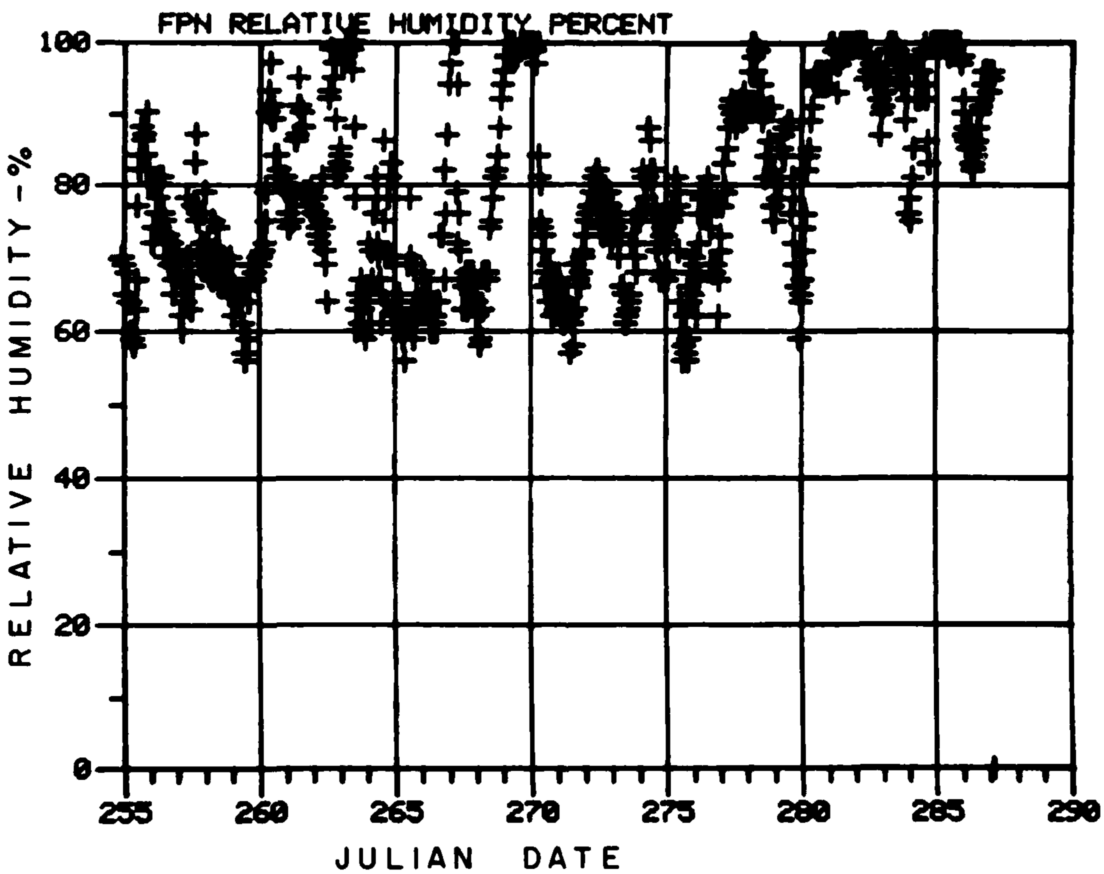

Fig. 21 — Relative humidity

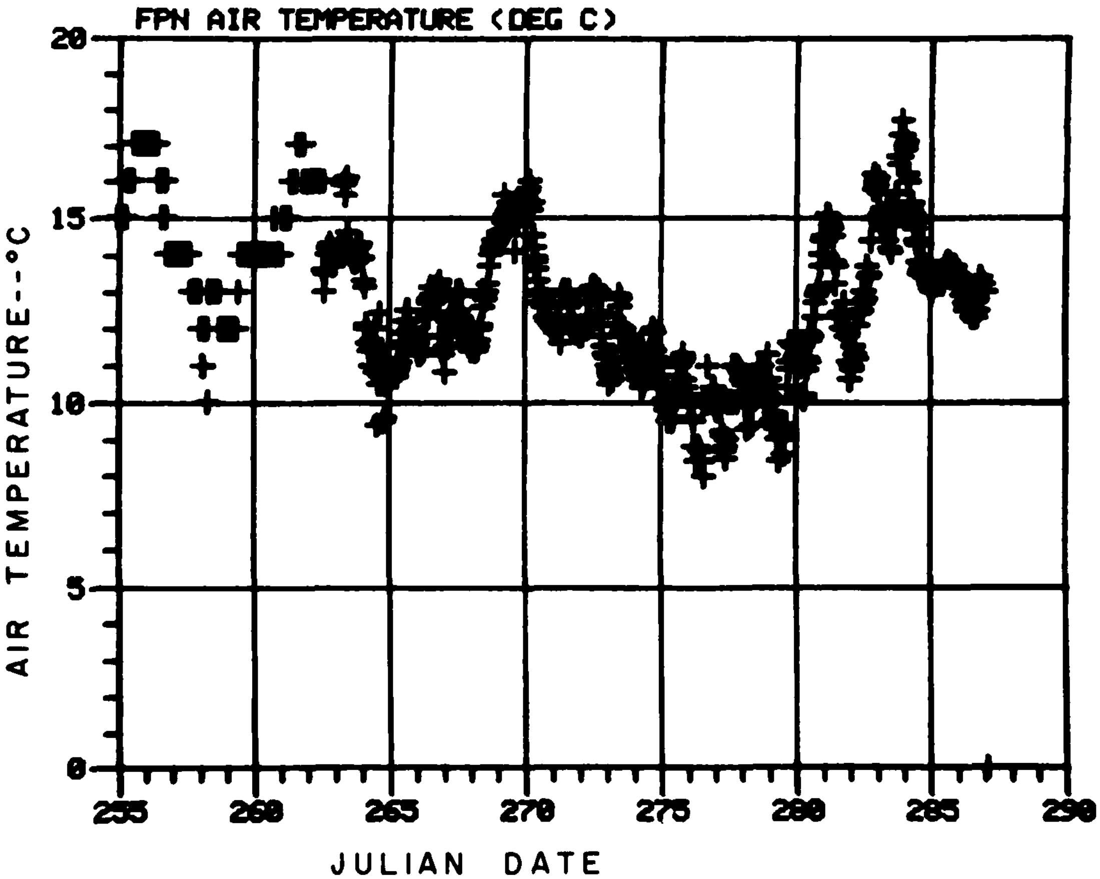

Fig. 22 — Air temperature

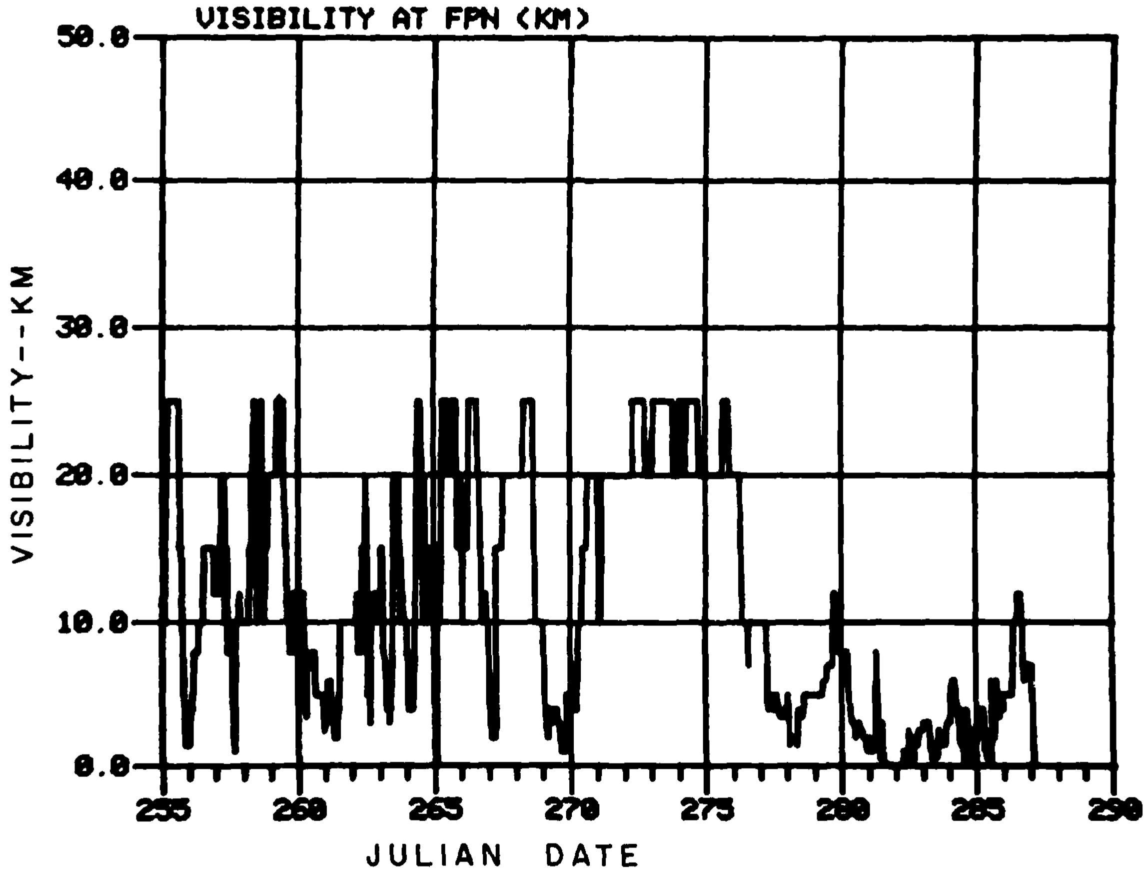

Fig. 23 — Visibility

mechanisms. The growth at high relative humidities of all elements in the size spectra causing the higher concentrations of the former smaller particles growing to larger sizes so as to now be counted by the instrument as larger particles is one mechanism which occurs at relative humidities above 95%. The production at the sea surface of particles in the white water phenomenon should be observable at high wind speeds or high wave heights or high occurance of white caps and constitutes the second mechanism responsible for the aerosol loading in the size classes of interest to us here.

These mechanisms can be recognized by utilizing the other information we have available. For instance if we wish to isolate out the effect of particle growth from high relative humidity effects we may plot out the aerosol concentration data as a function of relative humidity for all cases with wind speeds less than 10 knots and coming from the proper direction so as not to contain tower contamination effects. For the situation at FPN this means we can accept wind as long as it is coming from an angle greater than 180 degrees. The plot shown in figure 24 was obtained from the aerosol data base, printed in the appendix which has been sorted by the criterion mentioned above. Then for each 5 percentage point incremental step of relative humidity, the average of all of the measured concentration values for each size class was obtained. These are plotted in the figure in a relative way so as to determine what kind of

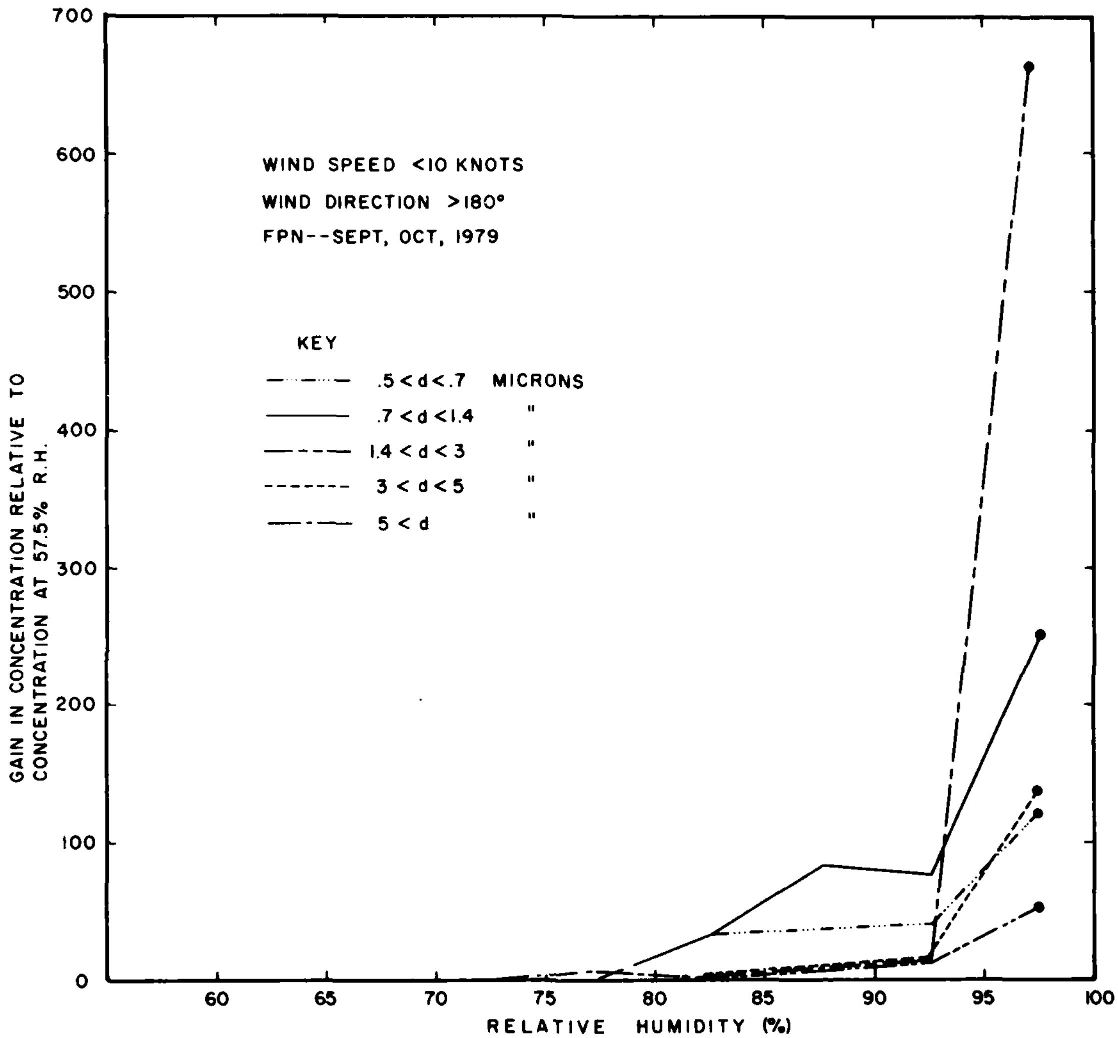


Fig. 24 — Aerosol concentration as a function of relative humidity

gain in concentration was experienced in each of the five size classes as a function of relative humidity. For instance if the relative humidity was in the increment of 70 to 75 percent, then the average concentration of each size class which were measured with relative humidities in this range is divided by the average concentration of the same size class which was measured in the relative humidity interval between 50 and 60 percent.

The data shown in the figure demonstrates that the really dramatic increases occur for all size classes when the relative humidities are between 95 and 100 percent. Relative humidities below this value produce very little gain in concentration for the largest three size classes. The two smallest size classes however show a plateau region of moderate gains in concentration at relative humidities greater than 80 percent but less than 95 percent.

The conclusion of this analysis is that if we are interested in the effects of the aerosol concentrations caused by the flux of aerosol from the sea surface from white water phenomena, then we had better isolate these cases in which the relative humidity is above 95 percent so as to not confuse the mechanical production process with the growth of aerosols phenomenon.

The passive microwave measurements of the sea surface has been studied for a number of years. Williams (1969) suggested that the very high microwave brightness temperature of sea foam

compared to the average sea surface was the reason for the measured correlation of microwave brightness temperature with wind speed. Hollinger (1971) made a series of passive microwave measurements at Argus Island tower and showed definite frequency dependent correlation between the microwave brightness temperature and wind speed. He reports that the relatively high microwave brightness temperature of sea foam compared to the general surface made it easy to recognize the signal produced by a white cap or foam patch and he excluded these effects of the antenna temperature averages. One of the purposes of this experiment was to determine if these spurious effects of white caps and foam can indeed be detected remotely and utilized in the remote sensing of aerosol production. These effects are definitely not excluded in the antenna temperatures reported here for either the horizontal or the vertical polarization information and listed in the appendix. These temperatures are the temperatures seen at the antenna inlet and are corrected only for the effects of spurious radiation entering the side and back lobes of the antenna but they are not corrected for the sky radiation reflected from the sea. They are expressed in degrees Kelvin for a series of nadir angles expressed in degrees.

Figure 25 shows a plot of all of the 19.3 Ghz radiometer measurements made at FPN during MARSEN I. The upper branch of data points are those measured from the vertical polarization

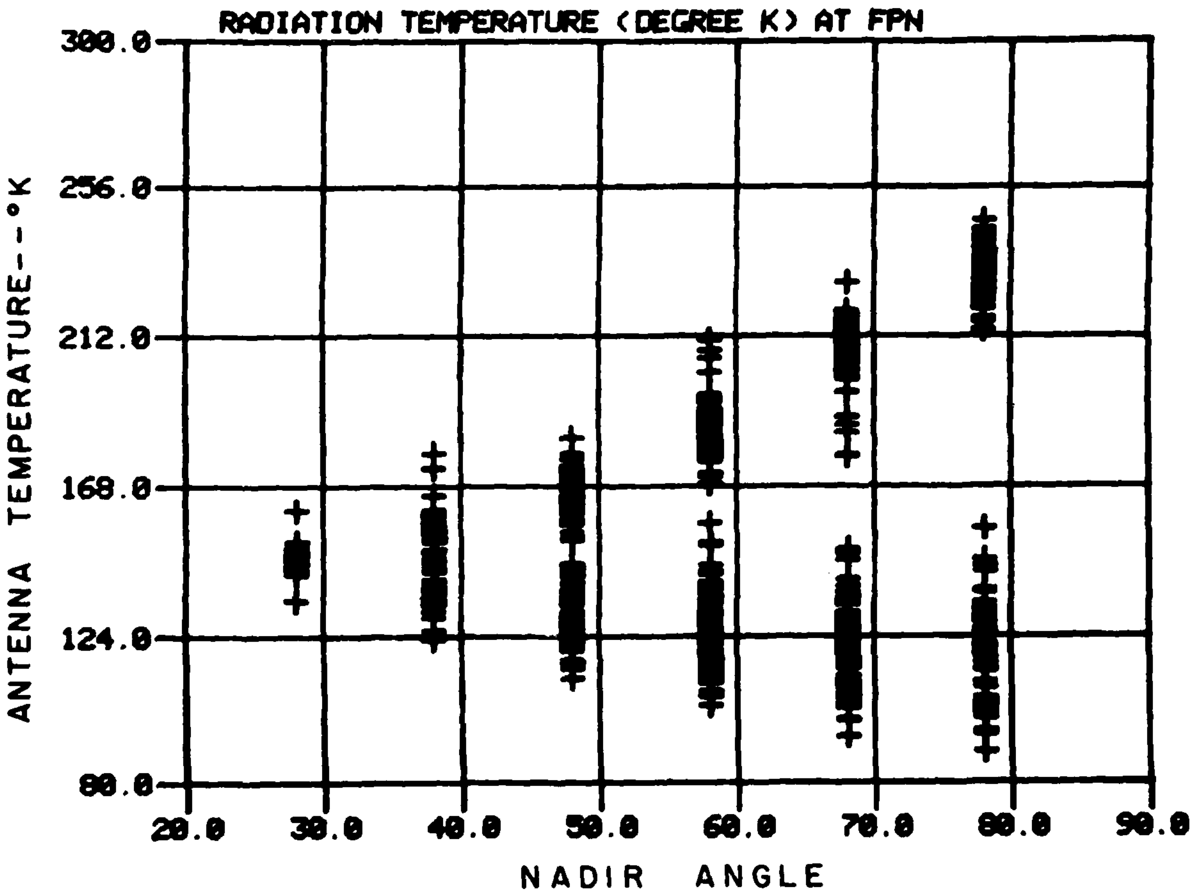


Fig. 25 — Passive radiometer measurements — FPN

channel of the instrument while the lower group of points come from the horizontal channel. The antenna temperatures of both channels merge as they approach 30 degrees from nadir.

Stogryn (1967) has theoretically found significant temperature changes which occur with increasing wind speed (neglecting the effects of white water and foam) for the horizontally polarized radiation. On the other hand his calculations show an invariance to sea state of the vertically polarized radiation at an angle near 50 degrees. This finding may prove very important in separating the effects of the increased microwave emissivity of sea foam and that of the geometry of an aroused sea state. The general characteristics of Stogryn's model are borne out by these measurements and in particular the larger spread of data exhibited by the horizontally polarized radiation as compared with the vertically polarized radiation.

As a preliminary study of the interactions of the standard meteorological parameters, the atmospheric aerosol and microwave temperatures contained in this report, a correlation matrix of key parameters is shown in figure 26. Here an H is shown in the appropriate box for a highly significant correlation between two parameters, a C for signs of a correlation and is left blank if the data shows no sign of a correlation.

In order to isolate the effects of tower contamination of

| | 1 | 2 | 3* | 4* | 5* | 6* | 7* | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. VERT. RAD. TEMP. @ 48° | I | H | – | – | – | C | C | C | C | – |
| 2. HOR. RAD. TEMP @ 58° | H | I | – | – | – | C | C | C | C | C |
| 3. AEROSOL* $.5 < d < .7\ \mu$ | – | – | I | H | H | – | – | C | – | – |
| 4. AEROSOL* $.7 < d < 1.4\ \mu$ | – | – | H | I | H | – | – | – | – | – |
| 5. AEROSOL* $1.4 < d < 3.\ \mu$ | – | – | H | H | I | C | C | – | – | – |
| 6. AEROSOL* $3. < d < 5.\ \mu$ | C | C | – | – | C | I | H | – | – | – |
| 7. AEROSOL* $5. < d\ \ \mu$ | C | C | – | – | C | H | I | – | C | – |
| 8. CLOUD COVER | C | C | C | – | – | – | – | I | – | – |
| 9. WIND SPEED | C | C | – | – | – | – | C | – | I | C |
| 10. WAVE HEIGHT | – | C | – | – | – | – | – | – | C | I |

* FOR WIND DIRECTION $>180°$ AND RELATIVE HUMIDITY $< 95\%$

KEY: H: CORR. COEFF. $> 0.7$

C: CORR. COEFF. $> 0.35$

Fig. 26 — Correlation matrix of aerosol parameters

the samples and high relative humidity on the correlation analysis with the aerosol data, only those data which were taken when the wind direction was from an angle of greater than 180 degrees and in which the relative humidity was less than 95% were used. This should eliminate contamination of the experiment by tower emissions and it should also avoid the change in concentrations in the standard size ranges which are caused by the growth of the droplets in a high relative humidity environment.

Parameters 1 and 2 are the two radiometer channels which should be of most interest in observing the effects of aerosol production at the sea surface. The vertical polarization at $48^{o}$ is supposed to be independent of sea state while the horizontal polarization at $58^{o}$ should show a maximum in variation with sea state. This theoretical result is borne out in the correlation matrix where only the horizontal channel exhibits a correlation with wave height. Both channels show a correlation with cloud cover showing that this known cause of signal variation has not been removed from the data. Finally a correlation is seen between both channels and the two largest size classes of aerosols but not the three smallest sizes. This indicates that the concentrations of aerosols in the sizes of d>3.0 during periods of relative humidity being less than 95%, is indeed dependent on the existance of sources of these particulates on the sea surface.

The aerosol concentrations in the three smallest size classifications correlate very well with each other but not well with most of the other parameters.

In conclusion, the data gathered at FPN during MARSEN I experiment appears to obey the general rules of atmospheric physics and should provide an useful data base with which to test hypothetical relationships between marine atmospheric aerosol, its sources and its predictions.

## 7. ACKNOWLEDGEMENTS

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# 9. APPENDIX I — METEOROLOGICAL DATA

ATMOSPHERIC PRESSURE (MB) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1012 | 1093 | 1014 | 1029 | 1015 | 1006 | 1012 |
| 1 | 1018 | 1012 | 1019 | 1015 | 1028 | 1015 | 1006 | 1012 |
| 2 | 1020 | 1011 | 1019 | 1016 | 1029 | 1014 | 1005 | 1012 |
| 3 | 1021 | 1010 | 1019 | 1016 | 1029 | 1013 | 1005 | 1012 |
| 4 | 1021 | 1010 | 1018 | 1017 | 1028 | 1012 | 1004 | 1012 |
| 5 | 1021 | 1009 | 1018 | 1018 | 1028 | 1012 | 1004 | 1012 |
| 6 | 1022 | 1009 | 1017 | 1019 | 1028 | 1011 | 1004 | 1012 |
| 7 | 1022 | 1010 | 1017 | 1019 | 1028 | 1011 | 1004 | 1012 |
| 8 | 1022 | 1010 | 1017 | 1020 | 1028 | 1011 | 1003 | 1013 |
| 9 | 1022 | 1011 | 1017 | 1021 | 1027 | 1011 | 1003 | 1013 |
| 10 | 1022 | 1012 | 1016 | 1022 | 1027 | 1011 | 1004 | 1013 |
| 11 | 1022 | 1013 | 1016 | 1023 | 1027 | 1011 | 1004 | 1014 |
| 12 | 1022 | 1013 | 1015 | 1023 | 1026 | 1011 | 1005 | 1014 |
| 13 | 1022 | 1015 | 1015 | 1024 | 1025 | 1011 | 1005 | 1014 |
| 14 | 1022 | 1016 | 1015 | 1025 | 1024 | 1011 | 1005 | 1014 |
| 15 | 1020 | 1016 | 1014 | 1025 | 1023 | 1010 | 1007 | 1014 |
| 16 | 1019 | 1016 | 1014 | 1025 | 1021 | 1009 | 1008 | 1014 |
| 17 | 1018 | 1016 | 1014 | 1026 | 1020 | 1009 | 1009 | 1014 |
| 18 | 1018 | 1017 | 1014 | 1026 | 1020 | 1009 | 1009 | 1014 |
| 19 | 1017 | 1017 | 1014 | 1027 | 1019 | 1009 | 1010 | 1015 |
| 20 | 1016 | 1018 | 1014 | 1028 | 1019 | 1009 | 1011 | 1015 |
| 21 | 1016 | 1018 | 1014 | 1028 | 1019 | 1009 | 1012 | 1015 |
| 22 | 1015 | 1018 | 1014 | 1028 | 1018 | 1009 | 1012 | 1015 |
| 23 | 1014 | 1018 | 1014 | 1028 | 1016 | 1007 | 1012 | 1014 |

ATMOSPHERIC PRESSURE (MB) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1007 | 1015 | 1024 | 1021 | 1024 | 1018 | 1017 |
| 1 | 1013 | 1007 | 1013 | 1024 | 1021 | 1024 | 1018 | 1016 |
| 2 | 1012 | 1007 | 1016 | 1024 | 1020 | 1024 | 1018 | 1016 |
| 3 | 1011 | 1008 | 1017 | 1024 | 1020 | 1024 | 1017 | 1016 |
| 4 | 1010 | 1008 | 1017 | 1024 | 1020 | 1024 | 1017 | 1017 |
| 5 | 1009 | 1008 | 1018 | 1024 | 1020 | 1024 | 1017 | 1018 |
| 6 | 1008 | 1009 | 1018 | 1023 | 1020 | 1024 | 1016 | 1018 |
| 7 | 1007 | 1010 | 1019 | 1023 | 1021 | 1023 | 1017 | 1018 |
| 8 | 1007 | 1011 | 1020 | 1023 | 1022 | 1023 | 1017 | 1018 |
| 9 | 1006 | 1012 | 1020 | 1023 | 1022 | 1023 | 1018 | 1021 |
| 10 | 1005 | 1012 | 1021 | 1023 | 1022 | 1023 | 1018 | 1022 |
| 11 | 1007 | 1013 | 1021 | 1023 | 1023 | 1023 | 1019 | 1023 |
| 12 | 1007 | 1013 | 1021 | 1023 | 1023 | 1023 | 1019 | 1024 |
| 13 | 1008 | 1013 | 1022 | 1023 | 1023 | 1022 | 1019 | 1025 |
| 14 | 1008 | 1013 | 1022 | 1022 | 1023 | 1022 | 1019 | 1025 |
| 15 | 1009 | 1013 | 1022 | 1022 | 1023 | 1022 | 1019 | 1026 |
| 16 | 1009 | 1012 | 1023 | 1022 | 1023 | 1021 | 1019 | 1027 |
| 17 | 1008 | 1013 | 1023 | 1022 | 1023 | 1020 | 1019 | 1027 |
| 18 | 1008 | 1013 | 1023 | 1021 | 1024 | 1020 | 1019 | 1028 |
| 19 | 1008 | 1014 | 1023 | 1021 | 1024 | 1019 | 1018 | 1029 |
| 20 | 1008 | 1014 | 1024 | 1021 | 1024 | 1019 | 1018 | 1030 |
| 21 | 1007 | 1014 | 1024 | 1021 | 1024 | 1019 | 1018 | 1030 |
| 22 | 1007 | 1015 | 1024 | 1021 | 1024 | 1019 | 1017 | 1030 |
| 23 | 1007 | 1015 | 1024 | 1021 | 1024 | 1018 | 1017 | 1031 |

ATMOSPHERIC PRESSURE (MB) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1034 | 1031 | 1028 | 1029 | 1028 | 1018 | 1010 |
| 1 | 1031 | 1033 | 1031 | 1028 | 1030 | 1028 | 1018 | 1010 |
| 2 | 1031 | 1033 | 1031 | 1028 | 1030 | 1028 | 1017 | 1010 |
| 3 | 1032 | 1033 | 1031 | 1028 | 1030 | 1028 | 1017 | 1011 |
| 4 | 1032 | 1033 | 1031 | 1028 | 1030 | 1027 | 1016 | 1011 |
| 5 | 1032 | 1033 | 1031 | 1027 | 1030 | 1027 | 1016 | 1010 |
| 6 | 1032 | 1033 | 1030 | 1027 | 1030 | 1026 | 1015 | 1011 |
| 7 | 1032 | 1033 | 1030 | 1027 | 1030 | 1025 | 1015 | 1010 |
| 8 | 1032 | 1033 | 1030 | 1028 | 1030 | 1025 | 1014 | 1011 |
| 9 | 1033 | 1033 | 1030 | 1028 | 1031 | 1025 | 1014 | 1012 |
| 10 | 1033 | 1033 | 1030 | 1028 | 1031 | 1025 | 1014 | 1012 |
| 11 | 1033 | 1033 | 1030 | 1028 | 1031 | 1024 | 1013 | 1012 |
| 12 | 1033 | 1032 | 1030 | 1028 | 1031 | 1024 | 1013 | 1013 |
| 13 | 1034 | 1032 | 1030 | 1028 | 1031 | 1023 | 1012 | 1013 |
| 14 | 1034 | 1032 | 1029 | 1028 | 1030 | 1022 | 1012 | 1013 |
| 15 | 1034 | 1032 | 1029 | 1028 | 1030 | 1022 | 1012 | 1013 |
| 16 | 1034 | 1032 | 1029 | 1028 | 1030 | 1021 | 1011 | 1014 |
| 17 | 1033 | 1032 | 1028 | 1028 | 1030 | 1021 | 1011 | 1014 |
| 18 | 1033 | 1032 | 1028 | 1028 | 1029 | 1021 | 1011 | 1015 |
| 19 | 1033 | 1031 | 1028 | 1028 | 1029 | 1021 | 1011 | 1015 |
| 20 | 1034 | 1031 | 1028 | 1028 | 1029 | 1021 | 1011 | 1016 |
| 21 | 1034 | 1031 | 1028 | 1028 | 1029 | 1020 | 1011 | 1017 |
| 22 | 1034 | 1031 | 1028 | 1029 | 1029 | 1020 | 1011 | 1017 |
| 23 | 1034 | 1031 | 1028 | 1029 | 1029 | 1019 | 1011 | 1017 |

ATMOSPHERIC PRESSURE (MB) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1019 | 1021 | 1022 | 1014 | 1006 | 1006 | 1004 |
| 1 | 1018 | 1019 | 1021 | 1022 | 1014 | 1006 | 1006 | 1004 |
| 2 | 1018 | 1019 | 1021 | 1021 | 1013 | 1006 | 1006 | 1004 |
| 3 | 1018 | 1018 | 1021 | 1021 | 1013 | 1006 | 1005 | 1004 |
| 4 | 1018 | 1018 | 1021 | 1020 | 1013 | 1006 | 1005 | 1004 |
| 5 | 1018 | 1018 | 1022 | 1020 | 1013 | 1006 | 1005 | 1004 |
| 6 | 1018 | 1018 | 1022 | 1019 | 1012 | 1006 | 1004 | 1004 |
| 7 | 1019 | 1017 | 1022 | 1018 | 1012 | 1006 | 1004 | 1004 |
| 8 | 1019 | 1017 | 1022 | 1018 | 1012 | 1007 | 1004 | 1004 |
| 9 | 1020 | 1018 | 1023 | 1018 | 1011 | 1007 | 1004 | 1005 |
| 10 | 1020 | 1018 | 1023 | 1018 | 1010 | 1008 | 1004 | 1005 |
| 11 | 1020 | 1018 | 1023 | 1018 | 1010 | 1008 | 1003 | 1005 |
| 12 | 1020 | 1018 | 1023 | 1018 | 1009 | 1008 | 1003 | 1005 |
| 13 | 1021 | 1018 | 1023 | 1017 | 1009 | 1008 | 1002 | 1004 |
| 14 | 1020 | 1018 | 1023 | 1016 | 1008 | 1007 | 1002 | 1004 |
| 15 | 1020 | 1018 | 1023 | 1016 | 1008 | 1007 | 1002 | 1004 |
| 16 | 1019 | 1018 | 1023 | 1014 | 1007 | 1008 | 1002 | 1003 |
| 17 | 1019 | 1019 | 1022 | 1015 | 1007 | 1007 | 1002 | 1002 |
| 18 | 1019 | 1019 | 1022 | 1015 | 1006 | 1007 | 1002 | 1002 |
| 19 | 1019 | 1020 | 1023 | 1015 | 1006 | 1007 | 1002 | 1002 |
| 20 | 1020 | 1020 | 1023 | 1014 | 1006 | 1007 | 1002 | 1001 |
| 21 | 1019 | 1020 | 1022 | 1014 | 1006 | 1007 | 1003 | 1001 |
| 22 | 1019 | 1020 | 1022 | 1014 | 1006 | 1007 | 1003 | 1001 |
| 23 | 1019 | 1020 | 1022 | 1014 | 1006 | 1006 | 1003 | 1001 |

RELATIVE HUMIDITY (%) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 80 | 71 | 76 | 69 | 70 | 80 | 76 |
| 1 | 70 | 80 | 69 | 79 | 65 | 69 | 79 | 76 |
| 2 | 69 | 80 | 68 | 71 | 62 | 70 | 76 | 78 |
| 3 | 65 | 72 | 62 | 72 | 66 | 71 | 74 | 76 |
| 4 | 65 | 74 | 62 | 68 | 65 | 71 | 75 | 74 |
| 5 | 68 | 74 | 60 | 70 | 65 | 72 | 75 | 73 |
| 6 | 64 | 76 | 64 | 70 | 65 | 75 | 75 | 72 |
| 7 | 64 | 78 | 64 | 67 | 64 | 79 | 78 | 75 |
| 8 | 60 | 74 | 66 | 75 | 64 | 90 | 86 | 81 |
| 9 | 59 | 81 | 78 | 71 | 61 | 93 | 87 | 74 |
| 10 | 58 | 80 | 70 | 68 | 57 | 97 | 91 | 71 |
| 11 | 60 | 81 | 68 | 68 | 56 | 89 | 95 | 69 |
| 12 | 63 | 76 | 66 | 74 | 57 | 91 | 91 | 64 |
| 13 | 67 | 75 | 63 | 71 | 58 | 89 | 90 | 92 |
| 14 | 77 | 70 | 66 | 66 | 59 | 84 | 90 | 93 |
| 15 | 82 | 73 | 77 | 68 | 64 | 81 | 88 | 99 |
| 16 | 84 | 73 | 83 | 70 | 67 | 81 | 79 | 99 |
| 17 | 88 | 70 | 87 | 69 | 69 | 84 | 79 | 95 |
| 18 | 86 | 69 | 75 | 66 | 69 | 82 | 79 | 97 |
| 19 | 87 | 70 | 76 | 69 | 68 | 81 | 78 | 89 |
| 20 | 84 | 72 | 71 | 67 | 67 | 80 | 77 | 81 |
| 21 | 90 | 65 | 69 | 66 | 68 | 80 | 79 | 82 |
| 22 | 82 | 67 | 71 | 65 | 69 | 80 | 79 | 83 |
| 23 | 80 | 69 | 72 | 70 | 69 | 81 | 77 | 84 |

RELATIVE HUMIDITY (%) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 66 | 64 | 64 | 97 | 62 | 98 | 100 |
| 1 | 82 | 72 | 64 | 65 | 100 | 60 | 100 | 100 |
| 2 | 97 | 61 | 64 | 68 | 100 | 60 | 100 | 99 |
| 3 | 98 | 71 | 63 | 67 | 100 | 58 | 100 | 97 |
| 4 | 100 | 71 | 65 | 65 | 100 | 59 | 100 | 100 |
| 5 | 100 | 67 | 63 | 63 | 100 | 63 | 98 | 100 |
| 6 | 100 | 76 | 60 | 64 | 94 | 68 | 100 | 84 |
| 7 | 100 | 81 | 59 | 65 | 79 | 68 | 100 | 81 |
| 8 | 100 | 78 | 61 | 60 | 72 | 68 | 99 | 80 |
| 9 | 99 | 72 | 56 | 60 | 76 | 67 | 98 | 75 |
| 10 | 96 | 70 | 61 | 61 | 71 | 68 | 98 | 74 |
| 11 | 100 | 67 | 61 | 60 | 67 | 67 | 99 | 71 |
| 12 | 88 | 61 | 69 | 62 | 63 | 74 | 99 | 73 |
| 13 | 78 | 65 | 78 | 60 | 66 | 75 | 99 | 66 |
| 14 | 60 | 86 | 70 | 64 | 67 | 78 | 100 | 68 |
| 15 | 63 | 75 | 61 | 64 | 68 | 81 | 100 | 64 |
| 16 | 65 | 64 | 59 | 73 | 63 | 81 | 100 | 69 |
| 17 | 61 | 70 | 63 | 73 | 68 | 82 | 100 | 67 |
| 18 | 67 | 78 | 69 | 73 | 68 | 84 | 100 | 62 |
| 19 | 64 | 81 | 62 | 82 | 68 | 88 | 100 | 64 |
| 20 | 63 | 83 | 65 | 76 | 65 | 88 | 100 | 66 |
| 21 | 64 | 70 | 64 | 67 | 68 | 92 | 100 | 66 |
| 22 | 59 | 78 | 63 | 87 | 66 | 94 | 100 | 63 |
| 23 | 64 | 62 | 64 | 94 | 64 | 96 | 100 | 67 |

RELATIVE HUMIDITY (%) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 73 | 73 | 75 | 67 | 70 | 73 | 91 |
| 1 | 67 | 75 | 75 | 76 | 72 | 69 | 77 | 96 |
| 2 | 66 | 76 | 74 | 82 | 68 | 62 | 83 | 100 |
| 3 | 63 | 77 | 74 | 81 | 45 | 67 | 80 | 98 |
| 4 | 62 | 77 | 76 | 80 | 75 | 72 | 79 | 100 |
| 5 | 61 | 79 | 76 | 78 | 77 | 76 | 85 | 100 |
| 6 | 63 | 79 | 70 | 81 | 76 | 79 | 88 | 96 |
| 7 | 62 | 80 | 73 | 88 | 81 | 78 | 91 | 91 |
| 8 | 64 | 81 | 66 | 88 | 81 | 76 | 92 | 99 |
| 9 | 63 | 81 | 66 | 86 | 79 | 78 | 92 | 92 |
| 10 | 57 | 82 | 65 | 82 | 77 | 79 | 90 | 91 |
| 11 | 62 | 82 | 62 | 80 | 71 | 79 | 90 | 94 |
| 12 | 63 | 77 | 61 | 82 | 64 | 81 | 89 | 89 |
| 13 | 61 | 76 | 62 | 77 | 60 | 79 | 88 | 90 |
| 14 | 58 | 74 | 63 | 75 | 56 | 76 | 90 | 90 |
| 15 | 69 | 78 | 64 | 71 | 58 | 74 | 91 | 81 |
| 16 | 63 | 73 | 65 | 71 | 62 | 69 | 91 | 84 |
| 17 | 66 | 76 | 72 | 72 | 57 | 68 | 92 | 84 |
| 18 | 67 | 77 | 75 | 68 | 56 | 68 | 90 | 86 |
| 19 | 66 | 79 | 75 | 67 | 59 | 69 | 89 | 91 |
| 20 | 68 | 79 | 72 | 73 | 66 | 77 | 93 | 91 |
| 21 | 70 | 79 | 70 | 74 | 64 | 62 | 91 | 77 |
| 22 | 70 | 77 | 68 | 76 | 68 | 67 | 91 | 82 |
| 23 | 71 | 72 | 76 | 73 | 65 | 71 | 91 | 75 |

# RELATIVE HUMIDITY (%) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 67 | 100 | 100 | 93 | 76 | 100 | 87 |
| 1 | 80 | 71 | 100 | 100 | 96 | 75 | 100 | 88 |
| 2 | 78 | 74 | 100 | 100 | 99 | 81 | 100 | 86 |
| 3 | 78 | 76 | 99 | 100 | 100 | 85 | 100 | 85 |
| 4 | 80 | 82 | 99 | 100 | 100 | 96 | 100 | 88 |
| 5 | 85 | 84 | 99 | 100 | 100 | 92 | 100 | 87 |
| 6 | 87 | 85 | 93 | 100 | 99 | 92 | 100 | 83 |
| 7 | 88 | 89 | 97 | 95 | 100 | 92 | 100 | 82 |
| 8 | 84 | 91 | 97 | 95 | 99 | 92 | 100 | 83 |
| 9 | 88 | 95 | 100 | 98 | 100 | 96 | 98 | 85 |
| 10 | 88 | 94 | 100 | 98 | 99 | 98 | 100 | 84 |
| 11 | 89 | 96 | 98 | 96 | 99 | 99 | 100 | 86 |
| 12 | 89 | 94 | 100 | 96 | 95 | 100 | 100 | 88 |
| 13 | 89 | 96 | 100 | 97 | 96 | 94 | 100 | 90 |
| 14 | 76 | 94 | 100 | 97 | 98 | 92 | 100 | 91 |
| 15 | 81 | 95 | 100 | 97 | 97 | 86 | 100 | 92 |
| 16 | 78 | 96 | 100 | 95 | 96 | 83 | 100 | 94 |
| 17 | 72 | 94 | 100 | 96 | 94 | 100 | 100 | 96 |
| 18 | 69 | 94 | 100 | 96 | 94 | 100 | 100 | 96 |
| 19 | 66 | 94 | 100 | 94 | 89 | 100 | 98 | 96 |
| 20 | 66 | 96 | 100 | 92 | 92 | 100 | 97 | 96 |
| 21 | 59 | 94 | 100 | 87 | 76 | 100 | 98 | 93 |
| 22 | 64 | 94 | 100 | 90 | 76 | 100 | 92 | 93 |
| 23 | 65 | 96 | 100 | 91 | 78 | 100 | 90 | 95 |

WIND SPEEDS (KNOTS) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 31 | 25 | 36 | 23 | 34 | 27 | 19 |
| 1 | 22 | 31 | 22 | 37 | 19 | 33 | 30 | 21 |
| 2 | 19 | 31 | 23 | 41 | 19 | 34 | 32 | 19 |
| 3 | 19 | 31 | 21 | 37 | 17 | 32 | 32 | 19 |
| 4 | 17 | 33 | 22 | 37 | 19 | 31 | 36 | 19 |
| 5 | 17 | 33 | 24 | 41 | 17 | 31 | 38 | 19 |
| 6 | 12 | 35 | 24 | 38 | 15 | 28 | 38 | 17 |
| 7 | 12 | 35 | 26 | 33 | 11 | 30 | 38 | 17 |
| 8 | 8 | 35 | 32 | 29 | 13 | 27 | 38 | 17 |
| 9 | 8 | 36 | 32 | 39 | 15 | 28 | 38 | 17 |
| 10 | 7 | 29 | 32 | 33 | 19 | 22 | 38 | 13 |
| 11 | 12 | 29 | 30 | 38 | 19 | 27 | 37 | 13 |
| 12 | 13 | 32 | 38 | 34 | 22 | 23 | 33 | 13 |
| 13 | 19 | 31 | 31 | 30 | 25 | 23 | 30 | 13 |
| 14 | 19 | 29 | 29 | 36 | 27 | 25 | 32 | 13 |
| 15 | 15 | 26 | 38 | 37 | 30 | 27 | 36 | 13 |
| 16 | 17 | 28 | 42 | 37 | 30 | 27 | 37 | 14 |
| 17 | 19 | 28 | 25 | 32 | 34 | 26 | 28 | 14 |
| 18 | 17 | 26 | 36 | 30 | 38 | 32 | 35 | 14 |
| 19 | 19 | 29 | 32 | 24 | 36 | 34 | 32 | 14 |
| 20 | 22 | 25 | 33 | 24 | 37 | 30 | 29 | 12 |
| 21 | 22 | 25 | 33 | 22 | 37 | 30 | 23 | 8 |
| 22 | 24 | 27 | 31 | 20 | 37 | 28 | 23 | 4 |
| 23 | 28 | 25 | 33 | 28 | 34 | 27 | 23 | 4 |

WIND SPEEDS (KNOTS) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 38 | 13 | 12 | 24 | 7 | 33 | 41 |
| 1 | 10 | 41 | 12 | 12 | 22 | 5 | 32 | 38 |
| 2 | 17 | 41 | 11 | 8 | 24 | 6 | 31 | 38 |
| 3 | 15 | 39 | 11 | 8 | 25 | 6 | 32 | 38 |
| 4 | 23 | 41 | 15 | 7 | 25 | 6 | 32 | 28 |
| 5 | 25 | 38 | 12 | 10 | 28 | 6 | 30 | 28 |
| 6 | 29 | 38 | 13 | 10 | 27 | 10 | 30 | 25 |
| 7 | 31 | 32 | 15 | 10 | 26 | 9 | 26 | 20 |
| 8 | 36 | 32 | 14 | 12 | 24 | 11 | 24 | 24 |
| 9 | 34 | 29 | 14 | 14 | 22 | 15 | 26 | 24 |
| 10 | 37 | 26 | 11 | 14 | 24 | 15 | 24 | 22 |
| 11 | 20 | 19 | 12 | 14 | 18 | 21 | 24 | 24 |
| 12 | 23 | 20 | 16 | 17 | 18 | 21 | 24 | 22 |
| 13 | 28 | 19 | 10 | 20 | 17 | 23 | 20 | 24 |
| 14 | 28 | 16 | 16 | 20 | 17 | 25 | 21 | 21 |
| 15 | 28 | 25 | 18 | 22 | 16 | 26 | 21 | 19 |
| 16 | 35 | 28 | 20 | 21 | 16 | 29 | 21 | 19 |
| 17 | 31 | 19 | 17 | 21 | 15 | 30 | 21 | 15 |
| 18 | 36 | 16 | 17 | 20 | 11 | 30 | 22 | 15 |
| 19 | 36 | 22 | 12 | 14 | 13 | 38 | 27 | 18 |
| 20 | 36 | 8 | 14 | 20 | 11 | 36 | 28 | 20 |
| 21 | 36 | 9 | 14 | 22 | 9 | 38 | 31 | 17 |
| 22 | 41 | 12 | 12 | 24 | 7 | 36 | 41 | 17 |
| 23 | 43 | 11 | 14 | 18 | 7 | 36 | 39 | 17 |

WIND SPEEDS (KNOTS) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 13 | 11 | 15 | 23 | 36 | 21 | 31 |
| 1 | 17 | 12 | 10 | 15 | 37 | 32 | 20 | 30 |
| 2 | 17 | 15 | 6 | 13 | 34 | 32 | 18 | 31 |
| 3 | 17 | 15 | 6 | 11 | 30 | 32 | 18 | 28 |
| 4 | 15 | 15 | 7 | 15 | 30 | 31 | 20 | 44 |
| 5 | 13 | 17 | 10 | 18 | 25 | 28 | 19 | 42 |
| 6 | 11 | 15 | 10 | 19 | 27 | 31 | 19 | 39 |
| 7 | 13 | 13 | 10 | 25 | 30 | 33 | 17 | 44 |
| 8 | 11 | 13 | 9 | 27 | 26 | 33 | 21 | 38 |
| 9 | 15 | 13 | 9 | 23 | 25 | 37 | 21 | 35 |
| 10 | 15 | 10 | 7 | 26 | 27 | 32 | 21 | 33 |
| 11 | 17 | 12 | 9 | 24 | 27 | 31 | 23 | 37 |
| 12 | 15 | 13 | 7 | 24 | 22 | 31 | 23 | 32 |
| 13 | 13 | 13 | 8 | 24 | 29 | 31 | 24 | 32 |
| 14 | 15 | 11 | 4 | 24 | 29 | 36 | 28 | 38 |
| 15 | 13 | 17 | 6 | 25 | 33 | 31 | 29 | 35 |
| 16 | 13 | 13 | 6 | 23 | 29 | 23 | 25 | 34 |
| 17 | 11 | 13 | 10 | 22 | 30 | 21 | 30 | 36 |
| 18 | 13 | 13 | 6 | 23 | 28 | 25 | 29 | 30 |
| 19 | 11 | 17 | 10 | 26 | 35 | 24 | 28 | 35 |
| 20 | 11 | 15 | 9 | 29 | 30 | 26 | 24 | 38 |
| 21 | 11 | 11 | 10 | 31 | 30 | 22 | 27 | 29 |
| 22 | 11 | 11 | 11 | 33 | 36 | 21 | 29 | 32 |
| 23 | 11 | 11 | 13 | 35 | 40 | 21 | 29 | 38 |

WIND SPEEDS (KNOTS) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 30 | 12 | 10 | 14 | 30 | 4 | 12 |
| 1 | 38 | 30 | 14 | 10 | 14 | 26 | 10 | 12 |
| 2 | 45 | 29 | 14 | 10 | 12 | 24 | 8 | 12 |
| 3 | 43 | 27 | 12 | 16 | 12 | 22 | 8 | 10 |
| 4 | 40 | 26 | 10 | 16 | 12 | 20 | 5 | 8 |
| 5 | 45 | 28 | 8 | 14 | 8 | 20 | 4 | 8 |
| 6 | 40 | 22 | 6 | 12 | 5 | 22 | 2 | 5 |
| 7 | 39 | 24 | 8 | 12 | 12 | 19 | 0 | 6 |
| 8 | 34 | 21 | 11 | 14 | 18 | 20 | 3 | 4 |
| 9 | 32 | 19 | 12 | 14 | 15 | 18 | 3 | 5 |
| 10 | 33 | 20 | 12 | 18 | 14 | 18 | 4 | 8 |
| 11 | 32 | 20 | 13 | 12 | 14 | 18 | 8 | 10 |
| 12 | 29 | 19 | 14 | 12 | 16 | 6 | 12 | 12 |
| 13 | 31 | 19 | 8 | 14 | 14 | 4 | 9 | 15 |
| 14 | 27 | 12 | 10 | 14 | 18 | 4 | 12 | 12 |
| 15 | 30 | 12 | 10 | 16 | 17 | 0 | 11 | 16 |
| 16 | 31 | 18 | 4 | 18 | 17 | 0 | 12 | 17 |
| 17 | 30 | 18 | 3 | 16 | 18 | 4 | 12 | 18 |
| 18 | 31 | 16 | 7 | 18 | 20 | 3 | 6 | 16 |
| 19 | 30 | 17 | 10 | 20 | 24 | 5 | 4 | 19 |
| 20 | 28 | 15 | 8 | 23 | 24 | 6 | 11 | 20 |
| 21 | 34 | 16 | 12 | 25 | 27 | 6 | 16 | 26 |
| 22 | 33 | 16 | 8 | 16 | 28 | 8 | 18 | 18 |
| 23 | 31 | 14 | 10 | 16 | 30 | 4 | 17 | 22 |

WIND DIRECTIONS AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 195 | 280 | 300 | 310 | 220 | 225 | 260 |
| 1 | 300 | 210 | 290 | 310 | 310 | 240 | 230 | 260 |
| 2 | 300 | 230 | 280 | 310 | 310 | 230 | 240 | 270 |
| 3 | 320 | 245 | 275 | 310 | 290 | 230 | 240 | 270 |
| 4 | 300 | 245 | 275 | 310 | 280 | 245 | 240 | 255 |
| 5 | 300 | 250 | 250 | 310 | 280 | 250 | 240 | 250 |
| 6 | 310 | 260 | 260 | 315 | 280 | 250 | 240 | 240 |
| 7 | 280 | 260 | 260 | 320 | 275 | 250 | 240 | 255 |
| 8 | 270 | 270 | 260 | 310 | 275 | 255 | 240 | 260 |
| 9 | 260 | 275 | 285 | 310 | 265 | 260 | 240 | 285 |
| 10 | 210 | 275 | 270 | 315 | 240 | 260 | 255 | 270 |
| 11 | 190 | 290 | 255 | 315 | 255 | 255 | 265 | 255 |
| 12 | 175 | 290 | 270 | 310 | 255 | 265 | 270 | 230 |
| 13 | 170 | 295 | 270 | 325 | 245 | 260 | 265 | 230 |
| 14 | 170 | 295 | 250 | 325 | 230 | 250 | 270 | 250 |
| 15 | 180 | 285 | 270 | 315 | 225 | 240 | 270 | 240 |
| 16 | 190 | 295 | 280 | 320 | 220 | 240 | 280 | 230 |
| 17 | 205 | 290 | 310 | 310 | 225 | 245 | 280 | 250 |
| 18 | 215 | 290 | 300 | 315 | 230 | 240 | 285 | 260 |
| 19 | 195 | 290 | 305 | 320 | 235 | 235 | 285 | 290 |
| 20 | 180 | 300 | 305 | 320 | 240 | 240 | 280 | 290 |
| 21 | 180 | 300 | 300 | 315 | 240 | 240 | 280 | 290 |
| 22 | 185 | 280 | 300 | 325 | 220 | 230 | 280 | 270 |
| 23 | 195 | 290 | 300 | 310 | 220 | 225 | 270 | 180 |

WIND DIRECTIONS AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 250 | 300 | 310 | 220 | 330 | 210 | 220 |
| 1 | 150 | 270 | 310 | 300 | 220 | 310 | 210 | 210 |
| 2 | 150 | 250 | 310 | 280 | 220 | 280 | 220 | 220 |
| 3 | 140 | 260 | 330 | 300 | 210 | 260 | 210 | 240 |
| 4 | 140 | 270 | 330 | 280 | 230 | 250 | 220 | 250 |
| 5 | 190 | 270 | 320 | 260 | 350 | 250 | 220 | 260 |
| 6 | 190 | 280 | 320 | 260 | 350 | 250 | 240 | 270 |
| 7 | 200 | 280 | 310 | 250 | 350 | 210 | 240 | 280 |
| 8 | 200 | 280 | 310 | 250 | 360 | 225 | 240 | 270 |
| 9 | 190 | 290 | 310 | 240 | 350 | 215 | 245 | 280 |
| 10 | 190 | 290 | 310 | 230 | 360 | 210 | 245 | 285 |
| 11 | 260 | 280 | 310 | 200 | 350 | 215 | 245 | 280 |
| 12 | 240 | 270 | 300 | 210 | 350 | 210 | 245 | 290 |
| 13 | 260 | 250 | 330 | 220 | 350 | 200 | 240 | 290 |
| 14 | 250 | 270 | 340 | 220 | 350 | 190 | 230 | 300 |
| 15 | 230 | 290 | 340 | 210 | 350 | 200 | 230 | 300 |
| 16 | 240 | 280 | 340 | 210 | 350 | 200 | 220 | 300 |
| 17 | 240 | 280 | 340 | 220 | 350 | 200 | 210 | 300 |
| 18 | 240 | 260 | 340 | 210 | 340 | 200 | 210 | 300 |
| 19 | 240 | 270 | 330 | 230 | 330 | 210 | 200 | 305 |
| 20 | 230 | 280 | 330 | 250 | 340 | 210 | 215 | 300 |
| 21 | 230 | 270 | 340 | 240 | 340 | 210 | 210 | 295 |
| 22 | 240 | 300 | 340 | 240 | 340 | 210 | 210 | 300 |
| 23 | 250 | 310 | 330 | 220 | 340 | 210 | 210 | 290 |

WIND DIRECTIONS AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 285 | 10 | 90 | 105 | 110 | 110 | 100 |
| 1 | 300 | 280 | 10 | 90 | 10 | 120 | 110 | 100 |
| 2 | 290 | 280 | 10 | 90 | 110 | 125 | 110 | 90 |
| 3 | 300 | 290 | 10 | 100 | 110 | 115 | 105 | 90 |
| 4 | 280 | 290 | 10 | 100 | 110 | 110 | 105 | 90 |
| 5 | 290 | 290 | 10 | 90 | 110 | 110 | 105 | 90 |
| 6 | 270 | 300 | 10 | 90 | 110 | 120 | 105 | 90 |
| 7 | 270 | 300 | 350 | 90 | 105 | 115 | 105 | 90 |
| 8 | 260 | 300 | 15 | 90 | 115 | 115 | 100 | 100 |
| 9 | 270 | 310 | 20 | 95 | 110 | 120 | 100 | 100 |
| 10 | 275 | 305 | 10 | 95 | 110 | 110 | 100 | 105 |
| 11 | 280 | 305 | 25 | 95 | 115 | 110 | 100 | 100 |
| 12 | 280 | 305 | 25 | 95 | 110 | 110 | 95 | 100 |
| 13 | 290 | 310 | 10 | 100 | 120 | 120 | 95 | 100 |
| 14 | 280 | 310 | 40 | 90 | 110 | 120 | 90 | 105 |
| 15 | 290 | 310 | 50 | 90 | 110 | 110 | 90 | 105 |
| 16 | 290 | 310 | 70 | 90 | 110 | 110 | 90 | 105 |
| 17 | 290 | 330 | 90 | 100 | 110 | 105 | 90 | 110 |
| 18 | 300 | 330 | 90 | 90 | 110 | 120 | 90 | 105 |
| 19 | 290 | 340 | 95 | 100 | 110 | 110 | 100 | 105 |
| 20 | 300 | 340 | 95 | 95 | 110 | 110 | 95 | 105 |
| 21 | 300 | 345 | 95 | 95 | 110 | 110 | 105 | 110 |
| 22 | 270 | 360 | 90 | 95 | 115 | 110 | 100 | 110 |
| 23 | 270 | 10 | 90 | 100 | 115 | 110 | 100 | 110 |

WIND DIRECTIONS AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 125 | 190 | 105 | 180 | 180 | 55 | 275 |
| 1 | 110 | 120 | 210 | 105 | 180 | 195 | 90 | 295 |
| 2 | 115 | 120 | 230 | 105 | 195 | 190 | 50 | 300 |
| 3 | 115 | 120 | 240 | 110 | 200 | 190 | 65 | 300 |
| 4 | 115 | 120 | 240 | 110 | 190 | 180 | 65 | 330 |
| 5 | 115 | 120 | 245 | 100 | 210 | 180 | 50 | 325 |
| 6 | 115 | 125 | 210 | 110 | 190 | 190 | 105 | 290 |
| 7 | 115 | 130 | 180 | 110 | 150 | 190 | 350 | 340 |
| 8 | 120 | 130 | 190 | 105 | 150 | 195 | 15 | 35 |
| 9 | 120 | 130 | 215 | 110 | 125 | 210 | 80 | 80 |
| 10 | 120 | 140 | 210 | 120 | 130 | 200 | 130 | 50 |
| 11 | 120 | 140 | 180 | 120 | 140 | 195 | 140 | 60 |
| 12 | 115 | 140 | 180 | 115 | 140 | 290 | 150 | 90 |
| 13 | 120 | 140 | 190 | 115 | 140 | 280 | 180 | 75 |
| 14 | 115 | 135 | 160 | 120 | 140 | 290 | 160 | 60 |
| 15 | 120 | 130 | 160 | 120 | 150 | 340 | 170 | 80 |
| 16 | 115 | 135 | 140 | 120 | 135 | 60 | 180 | 60 |
| 17 | 120 | 150 | 130 | 130 | 135 | 100 | 170 | 50 |
| 18 | 115 | 165 | 135 | 140 | 135 | 110 | 185 | 60 |
| 19 | 120 | 160 | 155 | 140 | 140 | 110 | 260 | 60 |
| 20 | 120 | 160 | 120 | 150 | 140 | 115 | 300 | 70 |
| 21 | 120 | 160 | 120 | 160 | 150 | 90 | 280 | 90 |
| 22 | 120 | 170 | 105 | 180 | 150 | 95 | 280 | 90 |
| 23 | 130 | 180 | 110 | 185 | 165 | 110 | 285 | 90 |

WAVE HEIGHT (M) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1.5 | 2.4 | 2.5 | 2.2 | 1.6 | 1.6 | 1.8 |
| 1 | 2.0 | 1.6 | 2.2 | 2.5 | 2.2 | 1.6 | 1.7 | 1.8 |
| 2 | 2.0 | 1.6 | 2.2 | 2.5 | 2.2 | 1.6 | 1.7 | 1.8 |
| 3 | 2.0 | 1.9 | 2.2 | 2.5 | 2.0 | 1.6 | 1.7 | 1.8 |
| 4 | 2.0 | 2.4 | 2.2 | 2.5 | 2.0 | 1.6 | 1.7 | 1.8 |
| 5 | 1.8 | 2.4 | 2.2 | 2.5 | 2.0 | 1.6 | 1.8 | 1.8 |
| 6 | 1.4 | 2.4 | 2.2 | 2.5 | 2.0 | 1.6 | 1.8 | 1.5 |
| 7 | 1.4 | 2.4 | 2.2 | 2.5 | 1.5 | 1.6 | 1.8 | 1.5 |
| 8 | 1.4 | 2.4 | 2.2 | 2.5 | 1.5 | 1.6 | 2.2 | 1.5 |
| 9 | 1.4 | 2.4 | 2.2 | 2.5 | 1.4 | 1.6 | 2.2 | 1.5 |
| 10 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.6 | 2.2 | 1.5 |
| 11 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.6 | 2.2 | 1.5 |
| 12 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.6 | 2.2 | 1.5 |
| 13 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.6 | 2.2 | 1.5 |
| 14 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.6 | 2.2 | 1.5 |
| 15 | 1.4 | 2.4 | 2.2 | 2.5 | 1.3 | 1.7 | 2.2 | 1.5 |
| 16 | 1.4 | 2.5 | 2.3 | 2.5 | 1.4 | 1.7 | 2.2 | 1.5 |
| 17 | 1.4 | 2.5 | 2.4 | 2.5 | 1.5 | 1.7 | 2.2 | 1.5 |
| 18 | 1.4 | 2.5 | 2.4 | 2.4 | 1.6 | 1.7 | 2.2 | 1.5 |
| 19 | 1.4 | 2.5 | 2.4 | 2.3 | 1.6 | 1.8 | 2.2 | 1.5 |
| 20 | 1.4 | 2.5 | 2.4 | 2.3 | 1.6 | 1.8 | 2.2 | 1.5 |
| 21 | 1.4 | 2.5 | 2.4 | 2.3 | 1.6 | 1.8 | 2.0 | 1.2 |
| 22 | 1.5 | 2.5 | 2.4 | 2.2 | 1.6 | 1.8 | 2.0 | 1.0 |
| 23 | 1.5 | 2.4 | 2.4 | 2.2 | 1.6 | 1.6 | 2.0 | 1.0 |

WAVE HEIGHT (M) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 3.2 | 2.0 | 1.0 | 1.2 | 1.0 | 1.8 | 1.8 |
| 1 | 1.5 | 3.2 | 1.8 | 0.8 | 1.3 | 0.8 | 1.8 | 1.8 |
| 2 | 1.5 | 3.2 | 1.5 | 0.8 | 1.3 | 0.8 | 2.0 | 1.8 |
| 3 | 1.5 | 3.2 | 1.5 | 0.8 | 1.3 | 0.8 | 2.0 | 1.8 |
| 4 | 1.6 | 3.2 | 1.5 | 0.8 | 1.3 | 0.8 | 2.0 | 1.8 |
| 5 | 1.7 | 3.2 | 1.5 | 0.8 | 1.3 | 0.8 | 2.0 | 1.8 |
| 6 | 1.8 | 3.2 | 1.0 | 0.8 | 1.3 | 0.8 | 2.0 | 1.5 |
| 7 | 2.0 | 3.0 | 1.2 | 0.8 | 1.3 | 0.8 | 2.0 | 1.5 |
| 8 | 2.0 | 3.0 | 1.2 | 0.8 | 1.3 | 0.7 | 2.0 | 1.5 |
| 9 | 2.0 | 3.0 | 1.2 | 0.8 | 1.3 | 0.7 | 1.9 | 1.5 |
| 10 | 2.2 | 2.8 | 1.0 | 0.8 | 1.3 | 0.7 | 1.9 | 1.5 |
| 11 | 2.8 | 3.0 | 1.0 | 0.8 | 1.3 | 0.7 | 1.8 | 1.5 |
| 12 | 2.8 | 3.0 | 1.0 | 0.8 | 1.3 | 0.7 | 1.8 | 1.5 |
| 13 | 2.8 | 2.5 | 0.8 | 0.8 | 1.3 | 1.0 | 1.4 | 1.0 |
| 14 | 2.8 | 2.5 | 0.8 | 1.0 | 1.3 | 1.3 | 1.4 | 1.0 |
| 15 | 2.6 | 2.5 | 0.8 | 1.0 | 1.3 | 1.3 | 1.4 | 1.0 |
| 16 | 2.8 | 2.5 | 0.8 | 1.0 | 1.3 | 1.3 | 1.4 | 1.0 |
| 17 | 2.8 | 2.0 | 0.8 | 1.0 | 1.3 | 1.5 | 1.4 | 1.0 |
| 18 | 2.8 | 2.0 | 1.0 | 1.0 | 1.3 | 1.6 | 1.4 | 1.0 |
| 19 | 2.8 | 2.5 | 1.0 | 1.0 | 1.3 | 1.6 | 1.5 | 1.0 |
| 20 | 2.8 | 2.5 | 1.0 | 1.0 | 1.3 | 1.7 | 1.5 | 1.0 |
| 21 | 2.8 | 2.2 | 1.0 | 1.2 | 1.3 | 1.8 | 1.5 | 1.0 |
| 22 | 3.0 | 2.2 | 1.0 | 1.2 | 1.1 | 1.8 | 1.6 | 1.0 |
| 23 | 3.2 | 2.0 | 1.0 | 1.2 | 1.0 | 1.8 | 1.8 | 7.0 |

WAVE HEIGHT (M) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.7 | 0.5 | 0.4 | 1.2 | 1.5 | 1.3 | 1.3 |
| 1 | 1.0 | 0.7 | 0.5 | 0.5 | 1.2 | 1.5 | 1.2 | 1.3 |
| 2 | 1.0 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.2 | 1.3 |
| 3 | 1.0 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.2 | 1.3 |
| 4 | 1.0 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.2 | 1.3 |
| 5 | 1.0 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.2 | 1.3 |
| 6 | 0.8 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.2 | 1.4 |
| 7 | 0.8 | 0.7 | 0.4 | 0.5 | 1.2 | 1.5 | 1.1 | 1.5 |
| 8 | 0.8 | 0.6 | 0.4 | 0.6 | 1.2 | 1.5 | 1.0 | 1.5 |
| 9 | 0.8 | 0.6 | 0.4 | 0.7 | 1.2 | 1.5 | 0.8 | 2.0 |
| 10 | 0.8 | 0.6 | 0.4 | 0.8 | 1.2 | 1.5 | 1.2 | 2.0 |
| 11 | 0.8 | 0.5 | 0.4 | 1.0 | 1.2 | 1.5 | 1.0 | 2.0 |
| 12 | 0.8 | 0.5 | 0.4 | 1.0 | 1.2 | 1.5 | 0.8 | 2.0 |
| 13 | 0.8 | 0.5 | 0.4 | 1.0 | 1.2 | 1.5 | 0.8 | 2.2 |
| 14 | 0.8 | 0.5 | 0.4 | 1.0 | 1.2 | 1.3 | 0.8 | 2.2 |
| 15 | 0.8 | 0.5 | 0.4 | 1.0 | 1.5 | 1.4 | 1.0 | 2.0 |
| 16 | 0.8 | 0.5 | 0.4 | 1.0 | 1.5 | 1.3 | 1.3 | 2.0 |
| 17 | 0.8 | 0.5 | 0.4 | 1.0 | 1.5 | 1.5 | 1.0 | 2.2 |
| 18 | 0.8 | 0.5 | 0.4 | 1.0 | 1.5 | 1.5 | 1.2 | 2.0 |
| 19 | 0.7 | 0.5 | 0.4 | 1.0 | 1.5 | 1.4 | 1.2 | 2.0 |
| 20 | 0.7 | 0.5 | 0.4 | 1.1 | 1.5 | 1.0 | 1.2 | 2.0 |
| 21 | 0.7 | 0.5 | 0.4 | 1.1 | 1.5 | 1.3 | 1.2 | 2.0 |
| 22 | 0.7 | 0.5 | 0.4 | 1.1 | 1.5 | 1.3 | 1.2 | 2.0 |
| 23 | 0.7 | 0.5 | 0.4 | 1.2 | 1.5 | 1.3 | 1.2 | 2.0 |

WAVE HEIGHT (M) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 1 | 2.0 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 2 | 2.0 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 3 | 2.0 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 4 | 2.0 | 1.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 5 | 2.0 | 1.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 6 | 2.0 | 1.5 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 |
| 7 | 2.0 | 1.5 | 0.3 | 0.4 | 0.3 | 0.4 | 0.2 | 0.3 |
| 8 | 2.0 | 1.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.2 | 3.0 |
| 9 | 2.0 | 1.2 | 0.3 | 0.3 | 0.2 | 0.4 | 0.2 | 0.3 |
| 10 | 2.0 | 1.2 | 0.3 | 0.4 | 0.2 | 0.4 | 0.2 | 3.0 |
| 11 | 1.8 | 1.2 | 0.3 | 0.4 | 0.2 | 0.5 | 0.2 | 0.3 |
| 12 | 1.8 | 1.2 | 0.3 | 0.4 | 0.2 | 0.3 | 0.1 | 0.3 |
| 13 | 1.5 | 1.0 | 0.3 | 0.4 | 0.2 | 0.3 | 0.1 | 0.3 |
| 14 | 1.5 | 1.0 | 0.3 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 |
| 15 | 1.5 | 1.0 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 |
| 16 | 1.5 | 0.8 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| 17 | 1.5 | 0.8 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| 18 | 1.5 | 0.5 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |
| 19 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 |
| 20 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| 21 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| 22 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| 23 | 1.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |

## VISIBILITY (KM) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1.5 | 12.0 | 10.0 | 20.0 | 12.0 | 3.0 | 10.0 |
| 1 | 10.0 | 1.5 | 12.0 | 10.0 | 20.0 | 10.0 | 3.5 | 10.0 |
| 2 | 10.0 | 4.5 | 12.0 | 10.0 | 20.0 | 10.0 | 4.0 | 10.0 |
| 3 | 12.0 | 4.0 | 12.0 | 10.0 | 20.0 | 10.0 | 6.0 | 10.0 |
| 4 | 10.0 | 5.0 | 12.0 | 10.0 | 20.0 | 12.0 | 6.0 | 12.0 |
| 5 | 15.0 | 8.0 | 16.0 | 10.0 | 20.0 | 12.0 | 6.0 | 12.0 |
| 6 | 20.0 | 8.0 | 20.0 | 15.0 | 25.0 | 8.0 | 4.0 | 8.0 |
| 7 | 25.0 | 8.0 | 20.0 | 15.0 | 25.0 | 8.0 | 3.0 | 8.0 |
| 8 | 25.0 | 8.0 | 20.0 | 20.0 | 25.0 | 3.5 | 2.0 | 8.0 |
| 9 | 25.0 | 8.0 | 10.0 | 20.0 | 25.0 | 8.0 | 2.0 | 15.0 |
| 10 | 25.0 | 10.0 | 15.0 | 25.0 | 25.0 | 7.0 | 2.0 | 15.0 |
| 11 | 25.0 | 10.0 | 8.0 | 25.0 | 25.0 | 7.0 | 3.0 | 15.0 |
| 12 | 25.0 | 10.0 | 10.0 | 20.0 | 20.0 | 7.0 | 4.0 | 20.0 |
| 13 | 25.0 | 10.0 | 10.0 | 10.0 | 17.0 | 8.0 | 5.0 | 15.0 |
| 14 | 25.0 | 15.0 | 10.0 | 15.0 | 15.0 | 8.0 | 10.0 | 5.0 |
| 15 | 25.0 | 15.0 | 10.0 | 20.0 | 10.0 | 8.0 | 10.0 | 7.0 |
| 16 | 25.0 | 15.0 | 2.0 | 25.0 | 10.0 | 6.0 | 10.0 | 3.0 |
| 17 | 15.0 | 15.0 | 1.0 | 15.0 | 8.0 | 5.0 | 10.0 | 10.0 |
| 18 | 15.0 | 15.0 | 10.0 | 15.0 | 8.0 | 5.0 | 10.0 | 10.0 |
| 19 | 10.0 | 15.0 | 10.0 | 10.0 | 8.0 | 5.0 | 10.0 | 12.0 |
| 20 | 5.0 | 15.0 | 10.0 | 15.0 | 8.0 | 5.0 | 10.0 | 12.0 |
| 21 | 1.5 | 15.0 | 12.0 | 15.0 | 12.0 | 5.0 | 10.0 | 12.0 |
| 22 | 1.5 | 15.0 | 10.0 | 20.0 | 12.0 | 5.0 | 10.0 | 12.0 |
| 23 | 1.5 | 12.0 | 10.0 | 20.0 | 12.0 | 2.5 | 10.0 | 12.0 |

VISIBILITY (KM) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 10.0 | 15.0 | 20.0 | 10.0 | 20.0 | 10.0 | 5.0 |
| 1 | 10.0 | 4.0 | 10.0 | 10.0 | 4.0 | 20.0 | 5.0 | 4.0 |
| 2 | 15.0 | 4.0 | 0.0 | 15.0 | 2.0 | 20.0 | 3.0 | 4.0 |
| 3 | 15.0 | 4.0 | 10.0 | 15.0 | 2.0 | 20.0 | 2.0 | 6.0 |
| 4 | 8.0 | 4.0 | 10.0 | 15.0 | 2.0 | 20.0 | 2.0 | 4.0 |
| 5 | 7.0 | 4.0 | 10.0 | 15.0 | 2.0 | 20.0 | 4.0 | 4.0 |
| 6 | 4.0 | 5.0 | 15.0 | 15.0 | 3.0 | 20.0 | 4.0 | 8.0 |
| 7 | 5.0 | 8.0 | 25.0 | 25.0 | 15.0 | 25.0 | 3.0 | 10.0 |
| 8 | 3.0 | 12.0 | 25.0 | 25.0 | 15.0 | 25.0 | 3.0 | 10.0 |
| 9 | 4.0 | 20.0 | 25.0 | 25.0 | 15.0 | 25.0 | 4.0 | 10.0 |
| 10 | 4.0 | 25.0 | 25.0 | 25.0 | 15.0 | 25.0 | 4.0 | 10.0 |
| 11 | 6.0 | 25.0 | 25.0 | 25.0 | 15.0 | 25.0 | 4.0 | 15.0 |
| 12 | 8.0 | 25.0 | 25.0 | 25.0 | 15.0 | 25.0 | 3.0 | 15.0 |
| 13 | 20.0 | 25.0 | 20.0 | 25.0 | 20.0 | 25.0 | 3.0 | 15.0 |
| 14 | 20.0 | 20.0 | 20.0 | 25.0 | 20.0 | 25.0 | 3.0 | 15.0 |
| 15 | 20.0 | 10.0 | 25.0 | 20.0 | 20.0 | 25.0 | 2.0 | 20.0 |
| 16 | 20.0 | 20.0 | 25.0 | 20.0 | 20.0 | 15.0 | 1.0 | 20.0 |
| 17 | 20.0 | 10.0 | 25.0 | 15.0 | 20.0 | 10.0 | 1.0 | 20.0 |
| 18 | 10.0 | 15.0 | 25.0 | 10.0 | 20.0 | 10.0 | 1.0 | 20.0 |
| 19 | 15.0 | 10.0 | 25.0 | 10.0 | 20.0 | 10.0 | 1.0 | 20.0 |
| 20 | 12.0 | 10.0 | 25.0 | 10.0 | 20.0 | 10.0 | 5.0 | 20.0 |
| 21 | 12.0 | 10.0 | 15.0 | 10.0 | 20.0 | 10.0 | 5.0 | 20.0 |
| 22 | 10.0 | 12.0 | 20.0 | 12.0 | 20.0 | 10.0 | 5.0 | 20.0 |
| 23 | 10.0 | 15.0 | 20.0 | 10.0 | 20.0 | 10.0 | 5.0 | 20.0 |

VISIBILITY (KM) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 10.0 | 5.0 |
| 1 | 10.0 | 20.0 | 25.0 | 25.0 | 20.0 | 20.0 | 10.0 | 1.5 |
| 2 | 10.0 | 20.0 | 25.0 | 25.0 | 20.0 | 20.0 | 10.0 | 2.0 |
| 3 | 15.0 | 20.0 | 25.0 | 25.0 | 20.0 | 20.0 | 10.0 | 2.0 |
| 4 | 20.0 | 20.0 | 25.0 | 25.0 | 20.0 | 20.0 | 10.0 | 2.0 |
| 5 | 20.0 | 20.0 | 25.0 | 20.0 | 20.0 | 20.0 | 10.0 | 2.0 |
| 6 | 20.0 | 20.0 | 25.0 | 25.0 | 20.0 | 20.0 | 4.0 | 2.0 |
| 7 | 20.0 | 20.0 | 25.0 | 25.0 | 20.0 | 15.0 | 5.0 | 2.0 |
| 8 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 5.0 | 1.5 |
| 9 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 5.0 | 4.0 |
| 10 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 5.0 | 4.0 |
| 11 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 4.0 | 3.5 |
| 12 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 4.0 | 3.5 |
| 13 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 7.0 | 5.0 | 3.5 |
| 14 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 | 10.0 | 5.0 | 4.0 |
| 15 | 20.0 | 25.0 | 25.0 | 25.0 | 25.0 | 10.0 | 4.0 | 5.0 |
| 16 | 20.0 | 25.0 | 25.0 | 25.0 | 25.0 | 10.0 | 3.5 | 5.0 |
| 17 | 20.0 | 25.0 | 25.0 | 25.0 | 25.0 | 10.0 | 3.5 | 5.0 |
| 18 | 20.0 | 25.0 | 25.0 | 20.0 | 25.0 | 10.0 | 3.5 | 5.0 |
| 19 | 20.0 | 20.0 | 20.0 | 20.0 | 25.0 | 10.0 | 3.5 | 5.0 |
| 20 | 20.0 | 20.0 | 20.0 | 20.0 | 25.0 | 10.0 | 3.5 | 5.0 |
| 21 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 10.0 | 4.0 | 5.0 |
| 22 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 10.0 | 4.0 | 5.0 |
| 23 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 10.0 | 4.0 | 5.0 |

VISIBILITY (KM) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 8.0 | 2.0 | 0.0 | 3.0 | 3.0 | 2.0 | 5.0 |
| 1 | 5.0 | 8.0 | 1.0 | 0.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| 2 | 5.0 | 8.0 | 1.0 | 0.0 | 3.0 | 6.0 | 3.0 | 5.0 |
| 3 | 5.0 | 8.0 | 1.5 | 0.0 | 3.0 | 6.0 | 3.0 | 5.0 |
| 4 | 5.0 | 8.0 | 1.5 | 0.0 | 3.0 | 6.0 | 4.0 | 5.0 |
| 5 | 5.0 | 8.0 | 2.0 | 0.0 | 3.0 | 5.0 | 4.0 | 5.0 |
| 6 | 5.0 | 5.0 | 8.0 | 1.0 | 2.0 | 4.0 | 3.0 | 5.0 |
| 7 | 6.0 | 4.0 | 8.0 | 1.0 | 0.5 | 3.0 | 1.0 | 7.0 |
| 8 | 6.0 | 3.0 | 4.0 | 1.0 | 0.5 | 4.0 | 0.5 | 8.0 |
| 9 | 6.0 | 3.0 | 0.5 | 0.8 | 0.5 | 2.0 | 0.5 | 10.0 |
| 10 | 6.0 | 3.0 | 2.0 | 0.5 | 0.5 | 1.5 | 0.2 | 10.0 |
| 11 | 7.0 | 2.0 | 3.0 | 2.5 | 0.7 | 2.0 | 0.1 | 10.0 |
| 12 | 7.0 | 2.5 | 0.1 | 2.0 | 1.0 | 0.1 | 2.0 | 12.0 |
| 13 | 7.0 | 2.5 | 0.1 | 2.0 | 2.5 | 0.1 | 6.0 | 10.0 |
| 14 | 7.0 | 2.5 | 0.1 | 0.5 | 1.5 | 4.0 | 3.5 | 12.0 |
| 15 | 7.0 | 3.0 | 0.1 | 0.5 | 1.5 | 3.0 | 2.0 | 10.0 |
| 16 | 10.0 | 2.5 | 0.1 | 2.0 | 1.5 | 2.0 | 5.0 | 10.0 |
| 17 | 12.0 | 2.5 | 0.0 | 2.0 | 2.0 | 0.5 | 6.0 | 7.0 |
| 18 | 12.0 | 2.0 | 0.0 | 1.5 | 2.0 | 0.5 | 4.0 | 6.0 |
| 19 | 10.0 | 2.0 | 0.0 | 2.5 | 1.5 | 2.5 | 3.5 | 7.0 |
| 20 | 10.0 | 2.0 | 0.0 | 2.5 | 2.5 | 2.5 | 5.0 | 7.0 |
| 21 | 8.0 | 2.0 | 0.0 | 2.5 | 3.0 | 2.0 | 4.0 | 7.0 |
| 22 | 8.0 | 1.0 | 0.0 | 2.5 | 3.0 | 1.0 | 4.0 | 7.0 |
| 23 | 8.0 | 2.0 | 0.0 | 2.5 | 3.0 | 2.0 | 5.0 | 7.0 |

AIR TEMPERATURE (DEG. C) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 |
| 1 | 15.0 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 |
| 2 | 15.0 | 17.0 | 14.0 | 12.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 3 | 15.0 | 17.0 | 14.0 | 11.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 4 | 15.0 | 17.0 | 14.0 | 11.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 5 | 15.0 | 17.0 | 14.0 | 12.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 6 | 15.0 | 17.0 | 14.0 | 12.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 7 | 15.0 | 17.0 | 14.0 | 12.0 | 12.0 | 14.0 | 15.0 | 16.0 |
| 8 | 15.0 | 17.0 | 14.0 | 10.0 | 12.0 | 14.0 | 16.0 | 16.0 |
| 9 | 16.0 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 16.0 | 16.0 |
| 10 | 16.0 | 17.0 | 14.0 | 13.0 | 13.0 | 14.0 | 16.0 | 16.0 |
| 11 | 16.0 | 17.0 | 14.0 | 13.0 | 14.0 | 14.0 | 16.0 | 16.0 |
| 12 | 16.0 | 16.0 | 14.0 | 13.0 | 14.0 | 14.0 | 16.0 | 16.0 |
| 13 | 16.0 | 16.0 | 14.0 | 13.0 | 14.0 | 14.0 | 16.0 | 16.0 |
| 14 | 16.0 | 16.0 | 14.0 | 13.0 | 14.0 | 14.0 | 17.0 | 13.6 |
| 15 | 17.0 | 15.0 | 14.0 | 13.0 | 14.0 | 14.0 | 17.0 | 13.0 |
| 16 | 17.0 | 15.0 | 14.0 | 13.0 | 14.0 | 14.0 | 17.0 | 13.5 |
| 17 | 17.0 | 16.0 | 13.0 | 13.0 | 14.0 | 14.0 | 17.0 | 14.0 |
| 18 | 17.0 | 16.0 | 13.0 | 13.0 | 14.0 | 15.0 | 17.0 | 14.2 |
| 19 | 17.0 | 15.0 | 13.0 | 12.0 | 14.0 | 15.0 | 17.0 | 14.3 |
| 20 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 | 14.2 |
| 21 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 | 14.0 |
| 22 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 | 13.7 |
| 23 | 17.0 | 14.0 | 13.0 | 12.0 | 14.0 | 14.0 | 16.0 | 13.8 |

AIR TEMPERATURE (DEG. C) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 13.9 | 10.7 | 11.7 | 11.3 | 11.6 | 14.6 | 15.5 |
| 1 | 14.1 | 13.3 | 10.6 | 11.6 | 10.8 | 11.4 | 14.5 | 15.7 |
| 2 | 14.1 | 13.1 | 10.7 | 11.4 | 11.5 | 11.5 | 14.6 | 15.8 |
| 3 | 14.0 | 12.0 | 10.9 | 11.3 | 11.5 | 11.4 | 14.6 | 16.0 |
| 4 | 14.2 | 12.1 | 0.9 | 11.3 | 12.2 | 11.4 | 14.9 | 15.2 |
| 5 | 14.2 | 12.0 | 10.7 | 11.4 | 12.0 | 11.4 | 15.6 | 15.4 |
| 6 | 15.9 | 11.6 | 10.7 | 11.4 | 11.9 | 11.5 | 15.1 | 14.5 |
| 7 | 15.9 | 11.4 | 10.9 | 11.8 | 12.3 | 11.7 | 14.9 | 14.2 |
| 8 | 15.6 | 11.0 | 11.0 | 11.8 | 12.4 | 12.0 | 15.2 | 13.9 |
| 9 | 16.0 | 11.7 | 11.1 | 12.5 | 12.3 | 12.1 | 15.4 | 13.8 |
| 10 | 16.1 | 11.5 | 11.1 | 12.3 | 12.3 | 12.6 | 15.3 | 13.6 |
| 11 | 14.6 | 10.8 | 11.6 | 12.7 | 12.3 | 13.0 | 15.3 | 13.3 |
| 12 | 14.3 | 12.0 | 11.9 | 12.8 | 13.0 | 12.9 | 15.3 | 13.0 |
| 13 | 14.2 | 11.5 | 11.5 | 13.1 | 12.5 | 12.8 | 15.2 | 12.7 |
| 14 | 14.0 | 9.4 | 12.2 | 12.9 | 13.0 | 13.0 | 15.1 | 12.9 |
| 15 | 13.9 | 10.5 | 12.5 | 12.7 | 12.3 | 13.2 | 14.1 | 12.7 |
| 16 | 13.8 | 12.4 | 12.5 | 12.9 | 12.9 | 13.7 | 14.8 | 12.6 |
| 17 | 13.8 | 11.1 | 12.5 | 13.1 | 12.2 | 14.0 | 14.8 | 12.7 |
| 18 | 13.8 | 10.5 | 12.2 | 13.1 | 12.1 | 14.2 | 15.3 | 12.3 |
| 19 | 14.0 | 9.5 | 12.0 | 12.8 | 12.1 | 14.4 | 15.1 | 12.2 |
| 20 | 14.2 | 9.6 | 11.9 | 13.3 | 12.1 | 14.4 | 15.3 | 12.2 |
| 21 | 14.2 | 10.5 | 11.9 | 13.2 | 11.8 | 14.3 | 15.4 | 12.2 |
| 22 | 14.3 | 11.1 | 11.7 | 11.8 | 11.6 | 14.3 | 15.5 | 12.1 |
| 23 | 13.9 | 10.8 | 11.7 | 11.4 | 11.5 | 14.4 | 15.5 | 12.1 |

AIR TEMPERATURE (DEG. C) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 11.9 | 11.0 | 11.4 | 11.0 | 10.2 | 9.9 | 10.7 |
| 1 | 12.0 | 11.8 | 10.8 | 11.3 | 10.7 | 9.9 | 9.8 | 10.5 |
| 2 | 11.9 | 11.8 | 10.5 | 11.1 | 10.4 | 9.9 | 10.1 | 9.9 |
| 3 | 11.9 | 12.0 | 10.7 | 11.3 | 10.1 | 9.6 | 9.9 | 10.2 |
| 4 | 12.1 | 12.0 | 10.7 | 10.9 | 9.8 | 9.5 | 9.8 | 9.3 |
| 5 | 12.3 | 12.0 | 10.6 | 10.7 | 9.9 | 8.8 | 9.2 | 9.9 |
| 6 | 12.3 | 12.0 | 10.9 | 10.8 | 9.5 | 8.8 | 9.1 | 10.0 |
| 7 | 11.6 | 12.7 | 10.9 | 10.4 | 9.6 | 8.4 | 8.7 | 10.0 |
| 8 | 12.9 | 12.2 | 12.1 | 10.5 | 9.6 | 8.8 | 8.8 | 9.4 |
| 9 | 13.0 | 12.3 | 12.1 | 10.6 | 9.5 | 8.8 | 8.5 | 10.4 |
| 10 | 13.0 | 12.9 | 12.9 | 10.7 | 9.6 | 8.7 | 9.0 | 10.1 |
| 11 | 12.9 | 13.1 | 12.8 | 10.7 | 10.1 | 8.4 | 10.0 | 10.4 |
| 12 | 12.9 | 13.1 | 12.6 | 11.1 | 10.2 | 8.4 | 10.0 | 10.5 |
| 13 | 12.9 | 13.1 | 11.8 | 11.3 | 10.4 | 8.0 | 10.0 | 10.2 |
| 14 | 13.0 | 12.9 | 11.9 | 11.4 | 10.4 | 10.0 | 10.0 | 10.6 |
| 15 | 12.6 | 13.0 | 12.0 | 11.5 | 10.7 | 10.0 | 11.0 | 10.9 |
| 16 | 12.7 | 13.0 | 11.8 | 11.9 | 11.0 | 10.0 | 11.0 | 11.0 |
| 17 | 12.2 | 12.8 | 11.4 | 12.0 | 11.1 | 11.0 | 11.0 | 11.0 |
| 18 | 12.1 | 12.3 | 11.1 | 11.9 | 11.1 | 10.0 | 10.0 | 10.5 |
| 19 | 12.0 | 12.4 | 10.9 | 11.4 | 11.2 | 10.0 | 11.0 | 10.2 |
| 20 | 11.9 | 11.8 | 11.2 | 11.2 | 11.3 | 10.0 | 11.0 | 9.9 |
| 21 | 12.0 | 11.5 | 11.4 | 10.7 | 10.6 | 10.4 | 10.9 | 10.2 |
| 22 | 11.9 | 11.3 | 11.8 | 10.5 | 10.4 | 10.4 | 10.8 | 10.2 |
| 23 | 11.9 | 11.2 | 11.7 | 11.0 | 10.2 | 10.2 | 10.6 | 11.3 |

AIR TEMPERATURE (DEG. C) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 11.3 | 14.5 | 10.9 | 15.7 | 17.0 | 13.0 | 13.3 |
| 1 | 10.4 | 11.1 | 14.4 | 11.0 | 15.1 | 17.1 | 13.3 | 13.1 |
| 2 | 9.5 | 11.0 | 15.1 | 11.5 | 14.9 | 16.2 | 13.3 | 13.2 |
| 3 | 10.1 | 11.0 | 15.1 | 11.5 | 14.8 | 16.0 | 13.2 | 12.9 |
| 4 | 9.7 | 11.0 | 15.0 | 11.3 | 14.7 | 15.3 | 13.2 | 12.8 |
| 5 | 9.3 | 10.2 | 14.8 | 11.2 | 14.9 | 15.2 | 13.2 | 12.7 |
| 6 | 9.0 | 10.1 | 14.7 | 12.1 | 15.1 | 15.4 | 13.3 | 12.5 |
| 7 | 9.3 | 10.2 | 14.5 | 12.4 | 14.4 | 15.1 | 13.3 | 12.5 |
| 8 | 8.4 | 10.9 | 14.5 | 12.5 | 15.3 | 14.9 | 13.2 | 12.6 |
| 9 | 9.0 | 11.2 | 13.8 | 12.5 | 15.3 | 14.7 | 13.2 | 12.7 |
| 10 | 9.0 | 11.1 | 13.2 | 12.7 | 14.2 | 14.4 | 13.3 | 12.8 |
| 11 | 9.1 | 11.7 | 13.7 | 13.0 | 14.1 | 14.3 | 13.6 | 12.6 |
| 12 | 8.6 | 11.9 | 12.3 | 13.0 | 14.9 | 13.8 | 13.6 | 12.3 |
| 13 | 9.2 | 11.8 | 12.3 | 12.8 | 14.8 | 13.5 | 13.7 | 12.3 |
| 14 | 9.4 | 11.8 | 12.4 | 13.7 | 14.8 | 13.6 | 13.8 | 12.3 |
| 15 | 10.4 | 12.3 | 12.3 | 13.4 | 15.2 | 14.3 | 13.8 | 12.3 |
| 16 | 10.9 | 12.7 | 12.0 | 13.5 | 15.7 | 13.7 | 13.7 | 12.5 |
| 17 | 11.1 | 12.9 | 12.0 | 14.4 | 16.7 | 13.4 | 13.7 | 12.8 |
| 18 | 11.6 | 13.0 | 12.7 | 15.0 | 16.5 | 13.4 | 13.6 | 12.5 |
| 19 | 11.6 | 13.1 | 12.0 | 15.8 | 17.3 | 13.4 | 13.7 | 13.4 |
| 20 | 11.6 | 13.7 | 11.8 | 16.2 | 16.7 | 13.7 | 13.7 | 13.4 |
| 21 | 11.5 | 14.0 | 11.1 | 16.0 | 17.7 | 13.6 | 13.3 | 13.2 |
| 22 | 11.2 | 14.4 | 10.6 | 15.9 | 17.3 | 13.2 | 13.4 | 13.2 |
| 23 | 11.6 | 14.5 | 10.6 | 16.1 | 16.9 | 13.1 | 13.5 | 13.0 |

4.5 METER WATER TEMPERATURE (C) AT FPN

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 15.3 | 15.3 | 15.1 | 14.7 | 14.5 | 14.5 | 14.7 |
| 1 | 15.5 | 15.3 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.7 |
| 2 | 15.5 | 15.4 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.7 |
| 3 | 15.5 | 15.4 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.7 |
| 4 | 15.5 | 15.4 | 15.3 | 15.1 | 14.6 | 14.4 | 14.5 | 14.6 |
| 5 | 15.5 | 15.4 | 15.3 | 15.1 | 14.6 | 14.4 | 14.5 | 14.6 |
| 6 | 15.5 | 15.4 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.6 |
| 7 | 15.4 | 15.4 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.6 |
| 8 | 15.4 | 15.4 | 15.3 | 15.1 | 14.6 | 14.5 | 14.5 | 14.6 |
| 9 | 15.4 | 15.4 | 15.2 | 15.0 | 14.6 | 14.5 | 14.5 | 14.6 |
| 10 | 15.3 | 15.4 | 15.2 | 15.0 | 14.5 | 14.5 | 14.7 | 14.6 |
| 11 | 15.3 | 15.3 | 15.2 | 14.9 | 14.5 | 14.6 | 14.6 | 14.6 |
| 12 | 15.3 | 15.3 | 15.2 | 14.9 | 14.5 | 14.6 | 14.8 | 14.6 |
| 13 | 15.4 | 15.3 | 15.2 | 14.8 | 14.5 | 14.6 | 14.8 | 14.6 |
| 14 | 15.4 | 15.4 | 15.2 | 14.8 | 14.5 | 14.6 | 14.8 | 14.4 |
| 15 | 15.4 | 15.4 | 15.2 | 14.8 | 14.5 | 14.5 | 14.8 | 14.4 |
| 16 | 15.4 | 15.4 | 15.3 | 14.8 | 14.5 | 14.5 | 14.7 | 14.3 |
| 17 | 15.4 | 15.4 | 15.3 | 14.8 | 14.5 | 14.5 | 14.6 | 14.3 |
| 18 | 15.5 | 15.4 | 15.3 | 14.9 | 14.5 | 14.5 | 14.6 | 14.2 |
| 19 | 15.5 | 15.4 | 15.2 | 14.8 | 14.5 | 14.6 | 14.6 | 14.2 |
| 20 | 15.5 | 15.3 | 15.2 | 14.8 | 14.5 | 14.5 | 14.6 | 14.2 |
| 21 | 15.4 | 15.3 | 15.2 | 14.8 | 14.5 | 14.5 | 14.6 | 14.2 |
| 22 | 15.4 | 15.3 | 15.2 | 14.8 | 14.5 | 14.5 | 14.6 | 14.2 |
| 23 | 15.3 | 15.3 | 15.2 | 14.7 | 14.5 | 14.5 | 14.6 | 14.2 |

## 4.5 METER WATER TEMPERATURE (C) AT FPN

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 14.2 | 14.2 | 14.0 | 13.9 | 14.1 | 14.1 | 14.0 |
| 1 | 14.4 | 14.4 | 14.4 | 14.2 | 14.2 | 13.9 | 13.9 | 14.2 |
| 2 | 14.3 | 14.4 | 14.3 | 14.2 | 14.0 | 13.9 | 14.1 | 14.3 |
| 3 | 14.3 | 14.4 | 14.3 | 14.0 | 14.2 | 14.0 | 14.0 | 14.3 |
| 4 | 14.3 | 14.4 | 14.3 | 14.0 | 14.0 | 13.9 | 14.1 | 14.3 |
| 5 | 14.3 | 14.4 | 14.3 | 14.2 | 14.0 | 14.0 | 13.9 | 14.3 |
| 6 | 14.2 | 14.4 | 14.3 | 14.0 | 14.6 | 13.8 | 14.1 | 14.4 |
| 7 | 14.2 | 14.2 | 14.1 | 13.9 | 14.0 | 14.1 | 14.1 | 14.3 |
| 8 | 14.2 | 14.2 | 14.2 | 14.1 | 14.1 | 14.1 | 14.0 | 14.3 |
| 9 | 14.2 | 14.2 | 14.1 | 14.1 | 13.9 | 14.1 | 14.0 | 14.2 |
| 10 | 14.2 | 14.2 | 14.1 | 14.0 | 14.1 | 14.1 | 14.0 | 14.2 |
| 11 | 14.2 | 14.2 | 14.1 | 14.2 | 13.9 | 14.1 | 14.0 | 14.2 |
| 12 | 14.2 | 14.2 | 14.3 | 14.0 | 14.0 | 14.1 | 14.0 | 14.2 |
| 13 | 14.4 | 14.2 | 14.2 | 14.2 | 14.2 | 13.9 | 13.9 | 14.3 |
| 14 | 14.4 | 14.2 | 14.2 | 14.1 | 14.0 | 14.1 | 14.0 | 14.4 |
| 15 | 14.4 | 14.4 | 14.2 | 14.1 | 14.0 | 14.0 | 14.0 | 14.4 |
| 16 | 14.4 | 14.4 | 14.2 | 14.1 | 14.2 | 14.1 | 14.1 | 14.4 |
| 17 | 14.3 | 14.4 | 14.2 | 14.1 | 14.0 | 14.0 | 14.1 | 14.4 |
| 18 | 14.3 | 14.3 | 14.1 | 14.0 | 14.4 | 14.1 | 14.1 | 14.4 |
| 19 | 14.2 | 14.2 | 14.0 | 14.0 | 14.1 | 14.1 | 14.0 | 14.1 |
| 20 | 14.2 | 14.2 | 14.0 | 14.1 | 14.1 | 14.1 | 14.0 | 14.1 |
| 21 | 14.2 | 14.2 | 14.0 | 14.0 | 14.1 | 14.1 | 14.0 | 14.1 |
| 22 | 14.2 | 14.4 | 14.0 | 14.1 | 14.1 | 14.1 | 14.0 | 14.0 |
| 23 | 14.2 | 14.4 | 14.2 | 14.0 | 14.1 | 14.1 | 14.0 | 14.0 |

## 4.5 METER WATER TEMPERATURE (C) AT FPN

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 13.9 | 13.9 | 13.8 | 13.7 | 13.4 | 13.3 | 13.4 |
| 1 | 14.0 | 13.9 | 13.9 | 13.7 | 13.6 | 13.3 | 13.3 | 13.4 |
| 2 | 14.0 | 13.9 | 13.9 | 13.7 | 13.5 | 13.3 | 13.3 | 13.4 |
| 3 | 14.0 | 13.9 | 13.9 | 13.7 | 13.6 | 13.3 | 13.3 | 13.4 |
| 4 | 14.6 | 13.9 | 13.9 | 13.8 | 13.6 | 13.3 | 13.3 | 13.5 |
| 5 | 13.9 | 14.0 | 13.9 | 13.7 | 13.6 | 13.3 | 13.4 | 13.5 |
| 6 | 13.9 | 14.0 | 13.9 | 13.7 | 13.6 | 13.3 | 13.4 | 13.5 |
| 7 | 14.0 | 13.9 | 14.0 | 13.7 | 13.6 | 13.3 | 13.4 | 13.5 |
| 8 | 13.9 | 13.9 | 13.8 | 13.7 | 13.5 | 13.3 | 13.2 | 13.5 |
| 9 | 13.9 | 13.9 | 13.8 | 13.7 | 13.5 | 13.3 | 13.0 | 13.3 |
| 10 | 14.0 | 13.9 | 13.7 | 13.7 | 13.5 | 13.4 | 13.0 | 13.3 |
| 11 | 13.9 | 13.8 | 13.7 | 13.7 | 13.5 | 13.3 | 13.2 | 13.3 |
| 12 | 13.9 | 13.8 | 13.7 | 13.6 | 13.5 | 13.3 | 13.2 | 13.3 |
| 13 | 13.9 | 13.9 | 13.7 | 13.7 | 13.5 | 13.1 | 13.2 | 13.4 |
| 14 | 13.9 | 13.9 | 13.7 | 13.7 | 13.4 | 13.1 | 13.3 | 13.4 |
| 15 | 13.9 | 13.9 | 13.7 | 13.7 | 13.4 | 13.1 | 13.3 | 13.3 |
| 16 | 14.0 | 13.9 | 13.7 | 13.7 | 13.4 | 13.2 | 13.3 | 13.4 |
| 17 | 14.0 | 14.0 | 13.7 | 13.7 | 13.4 | 13.2 | 13.3 | 13.3 |
| 18 | 14.0 | 13.9 | 13.8 | 13.7 | 13.4 | 13.1 | 13.3 | 13.3 |
| 19 | 14.0 | 13.9 | 13.8 | 13.7 | 13.4 | 13.1 | 13.4 | 13.3 |
| 20 | 14.0 | 13.9 | 13.8 | 13.7 | 13.4 | 13.1 | 13.2 | 13.3 |
| 21 | 13.9 | 13.9 | 13.8 | 13.7 | 13.4 | 13.3 | 13.4 | 13.4 |
| 22 | 13.9 | 13.9 | 13.8 | 13.7 | 13.4 | 13.3 | 13.4 | 13.4 |
| 23 | 13.9 | 13.9 | 13.7 | 13.7 | 13.4 | 13.3 | 13.4 | 13.4 |

## 4.5 METER WATER TEMPERATURE (C) AT FPN

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 13.3 | 13.3 | 13.2 | 13.2 | 13.2 | 13.3 | 13.4 |
| 1 | 13.4 | 13.3 | 13.2 | 13.3 | 13.2 | 13.2 | 13.3 | 13.3 |
| 2 | 13.4 | 13.3 | 13.2 | 13.3 | 13.2 | 13.3 | 13.3 | 13.3 |
| 3 | 13.4 | 13.3 | 13.2 | 13.3 | 13.2 | 13.3 | 13.3 | 13.3 |
| 4 | 13.4 | 13.3 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.4 |
| 5 | 13.4 | 13.2 | 13.3 | 13.2 | 13.2 | 13.3 | 13.3 | 13.4 |
| 6 | 13.4 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.4 |
| 7 | 13.4 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.4 |
| 8 | 13.4 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.3 |
| 9 | 13.4 | 13.2 | 13.2 | 13.2 | 13.1 | 13.1 | 13.1 | 13.2 |
| 10 | 13.3 | 13.2 | 13.2 | 13.2 | 13.1 | 13.1 | 13.1 | 13.1 |
| 11 | 13.3 | 13.2 | 13.2 | 13.2 | 13.1 | 13.1 | 13.1 | 13.1 |
| 12 | 13.2 | 13.1 | 13.2 | 13.2 | 13.1 | 13.1 | 13.1 | 13.1 |
| 13 | 13.3 | 13.2 | 13.2 | 13.2 | 13.1 | 13.2 | 13.1 | 13.1 |
| 14 | 13.5 | 13.2 | 13.2 | 13.2 | 13.1 | 13.2 | 13.1 | 13.2 |
| 15 | 13.5 | 13.2 | 13.2 | 12.1 | 13.2 | 13.2 | 13.1 | 13.1 |
| 16 | 13.5 | 13.0 | 13.2 | 12.1 | 13.2 | 13.2 | 13.2 | 13.1 |
| 17 | 13.5 | 13.2 | 13.3 | 13.2 | 13.1 | 13.2 | 13.2 | 13.1 |
| 18 | 13.3 | 13.3 | 13.3 | 13.1 | 13.1 | 13.2 | 13.2 | 13.1 |
| 19 | 13.3 | 13.2 | 13.3 | 13.1 | 13.1 | 13.2 | 13.1 | 13.2 |
| 20 | 13.2 | 13.2 | 13.3 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 |
| 21 | 13.3 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.4 | 13.3 |
| 22 | 13.3 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.4 | 13.3 |
| 23 | 13.3 | 13.2 | 13.2 | 13.2 | 13.2 | 13.3 | 13.4 | 13.3 |

# 10. APPENDIX II — AEROSOL DATA

FPN PARTICLES/CC IN SIZE RANGE (0.5<DIA<0.7) MICRONS

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 17 | 7 | 52 | 373 | 28 |
| 1 | | | | 17 | 7 | 59 | 334 | 33 |
| 2 | | | | 17 | 7 | 65 | 314 | 39 |
| 3 | | | | 15 | 7 | 77 | 284 | 40 |
| 4 | | | | 15 | 6 | 90 | 201 | 46 |
| 5 | | | | 14 | 6 | 91 | 170 | 73 |
| 6 | | | | 14 | 6 | | 473 | 131 |
| 7 | | | | 16 | 6 | | | 138 |
| 8 | | | | 16 | 6 | | | 27 |
| 9 | | | | 13 | 6 | | | 20 |
| 10 | | | | | 6 | | 236 | 23 |
| 11 | | | | | 6 | 75 | 177 | 29 |
| 12 | | | | | 12 | 125 | 100 | 510 |
| 13 | | | | 9 | 47 | 154 | 57 | 498 |
| 14 | | | | 9 | 47 | 123 | 25 | 495 |
| 15 | | | | | 55 | 125 | 20 | 512 |
| 16 | | | | | 63 | 193 | 18 | 517 |
| 17 | | | | | 66 | 223 | 14 | 453 |
| 18 | | | | | | 291 | | 386 |
| 19 | | | | | | 257 | 20 | 374 |
| 20 | | | | 7 | 67 | 332 | 23 | 366 |
| 21 | | | | 8 | 46 | 588 | 26 | 338 |
| 22 | | | | 9 | 77 | 236 | 26 | 343 |
| 23 | | | 16 | 8 | 69 | 414 | 26 | 338 |

FPN PARTICLES/CC IN SIZE RANGE (0.5<DIA<0.7) MICRONS

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 20 | 8 | 4 | | 8 | 879 | |
| 1 | 454 | 20 | 7 | 4 | 74 | 7 | | |
| 2 | 485 | 21 | 8 | 4 | 62 | 5 | 755 | |
| 3 | 375 | 14 | 9 | 4 | 64 | 7 | 686 | |
| 4 | 521 | 13 | 8 | | 30 | 7 | 270 | |
| 5 | 507 | 12 | 7 | | 15 | 6 | 131 | |
| 6 | 517 | | 7 | | | 6 | 207 | |
| 7 | 765 | | 7 | | 10 | 3 | 154 | 52 |
| 8 | 449 | 12 | 8 | 4 | 11 | 4 | 121 | 32 |
| 9 | 535 | 14 | 7 | 4 | 11 | 4 | 135 | 35 |
| 10 | 179 | 13 | 6 | | 11 | 3 | 189 | 22 |
| 11 | 145 | 11 | 5 | | 10 | 9 | 159 | 24 |
| 12 | 23 | 12 | 13 | | 10 | 15 | 246 | 8 |
| 13 | 17 | 14 | 15 | 7 | 12 | 20 | 886 | 9 |
| 14 | 26 | 16 | 15 | 8 | 9 | 69 | 702 | 24 |
| 15 | 20 | 14 | 11 | 9 | 9 | 73 | 659 | 6 |
| 16 | 18 | | | 10 | 7 | 71 | 1591 | 0 |
| 17 | 24 | | 15 | 11 | | 86 | 1117 | 0 |
| 18 | 29 | | 13 | 8 | | 135 | 1715 | 10 |
| 19 | 29 | 13 | 7 | 7 | | 160 | 838 | 8 |
| 20 | 32 | 11 | 6 | 7 | 9 | 183 | 814 | 8 |
| 21 | 37 | 10 | 5 | 19 | 10 | 332 | 841 | 7 |
| 22 | 27 | 9 | 4 | 31 | 0 | 445 | 1063 | 7 |
| 23 | 23 | 8 | 4 | | 2 | 559 | 808 | 7 |

FPN PARTICLES/CC IN SIZE RANGE (0.5<DIA<0.7) MICRONS

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 11 | | 65 | 59 | | 261 | |
| 1 | 10 | 10 | | | 38 | | 304 | |
| 2 | 12 | 9 | | | 55 | | 300 | |
| 3 | 14 | 10 | | | 44 | | 504 | |
| 4 | 14 | 8 | | | 37 | | 440 | |
| 5 | | 10 | | | 30 | | 305 | |
| 6 | | 13 | 17 | 60 | 47 | 127 | 390 | |
| 7 | 19 | 14 | 18 | 67 | 45 | 95 | 415 | |
| 8 | 22 | 21 | 17 | 66 | 45 | | 570 | 26 |
| 9 | 26 | 11 | 10 | 50 | 56 | | 5 | 215 |
| 10 | 27 | 12 | 13 | 93 | 47 | | 42 | 271 |
| 11 | 26 | 10 | 9 | 52 | 23 | | 60 | |
| 12 | 23 | | 7 | 59 | 37 | | | 91 |
| 13 | 20 | | 3 | 57 | 41 | | | 84 |
| 14 | 19 | | 9 | 59 | 54 | | | 59 |
| 15 | 12 | | 4 | 58 | 62 | | | 43 |
| 16 | | | 5 | 50 | 52 | | | 44 |
| 17 | 12 | | 3 | 50 | 49 | | | 41 |
| 18 | 12 | | 17 | 40 | 32 | 125 | | 35 |
| 19 | 12 | | 11 | 54 | 47 | | | 45 |
| 20 | 11 | | 26 | 59 | 31 | 152 | | 45 |
| 21 | 7 | | 41 | 23 | | 121 | | |
| 22 | 7 | | 91 | 51 | | 203 | | 78 |
| 23 | 9 | | 62 | 38 | | 153 | | 65 |

FPN PARTICLES/CC IN SIZE RANGE (0.5<DIA<0.7) MICRONS

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 60 | 651 | 1997 | 1302 | 426 | 410 | 264 |
| 1 | 67 | 64 | 764 | 4594 | 1089 | 441 | 500 | 255 |
| 2 | 64 | 74 | 587 | 4444 | 1750 | 495 | 555 | 203 |
| 3 | 68 | 85 | 556 | 1862 | 2949 | 508 | 608 | 164 |
| 4 | 63 | 96 | 375 | | 1433 | 504 | 638 | 229 |
| 5 | 60 | 102 | 285 | 4063 | 1002 | 493 | 662 | 277 |
| 6 | 58 | 95 | 249 | | 2032 | 484 | 3008 | 305 |
| 7 | 52 | 79 | 187 | | 1019 | 502 | 1110 | 281 |
| 8 | 52 | 133 | 1747 | 830 | | 579 | 959 | 0 |
| 9 | 49 | 143 | | | 495 | 581 | 5532 | |
| 10 | 52 | 138 | 542 | | | 548 | 1017 | |
| 11 | 58 | 143 | 1948 | | | 3103 | 399 | |
| 12 | 69 | 150 | 2908 | 2628 | | 2943 | 132 | |
| 13 | 73 | 155 | 1441 | 11441 | 2132 | 313 | 283 | |
| 14 | 54 | 162 | 1930 | 827 | 1460 | 322 | 255 | |
| 15 | 41 | | 2038 | 849 | 1417 | 305 | 236 | |
| 16 | 34 | 202 | 2553 | 869 | 712 | 378 | 289 | |
| 17 | 38 | 213 | 3973 | | 737 | 395 | 305 | |
| 18 | 38 | 243 | 2092 | 870 | 731 | 347 | 294 | |
| 19 | 44 | 255 | | 879 | 720 | 398 | 32 | |
| 20 | 49 | 2329 | | 889 | 557 | 420 | 44 | |
| 21 | 50 | 927 | | 869 | 442 | 395 | 152 | |
| 22 | 57 | 332 | | 932 | 433 | 370 | 164 | |
| 23 | 59 | | 2016 | 940 | 420 | 344 | 247 | |

FPN PARTICLES/CC IN SIZE RANGE (.7<DIA<1.4) MICRONS

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 12 | 6 | 31 | 142 | 12 |
| 1 | | | | 12 | 5 | 34 | 123 | 15 |
| 2 | | | | 12 | 5 | 37 | 124 | 16 |
| 3 | | | | 12 | 5 | 38 | 113 | 17 |
| 4 | | | | 13 | 4 | 39 | 78 | 26 |
| 5 | | | | 10 | 4 | 38 | 70 | 33 |
| 6 | | | | 11 | 4 | | | 52 |
| 7 | | | | 13 | 4 | | | 55 |
| 8 | | | | 13 | 4 | | | 17 |
| 9 | | | | 9 | 4 | | | 14 |
| 10 | | | | | 4 | | 130 | 12 |
| 11 | | | | | 4 | 22 | 83 | 12 |
| 12 | | | | | 6 | 37 | 48 | 48 |
| 13 | | | | 7 | 20 | 47 | 32 | 45 |
| 14 | | | | 7 | 21 | 38 | 20 | 51 |
| 15 | | | | | 25 | 40 | 17 | 63 |
| 16 | | | | | 29 | 67 | 15 | 65 |
| 17 | | | | | 30 | 81 | 13 | 42 |
| 18 | | | | | | 121 | | 25 |
| 19 | | | | | | 95 | 11 | 25 |
| 20 | | | | 6 | 30 | 125 | 11 | 26 |
| 21 | | | | 6 | 24 | 32 | 12 | 20 |
| 22 | | | | 6 | 40 | 88 | 12 | 21 |
| 23 | | | 12 | 6 | 38 | 161 | 12 | 28 |

FPN PARTICLES/CC IN SIZE RANGE ( .7<DIA<1.4) MICRONS

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 11 | 2 | 3 | 39 | 4 | 300 | |
| 1 | 68 | 11 | 2 | 3 | 27 | 2 | | |
| 2 | 101 | 10 | 3 | 3 | 24 | 2 | 305 | |
| 3 | 63 | 8 | 3 | 3 | 26 | 3 | 208 | |
| 4 | 161 | 7 | 3 | | 15 | 0 | 67 | |
| 5 | 149 | 6 | 2 | | 11 | 0 | 174 | |
| 6 | 151 | | 2 | | | 4 | 100 | |
| 7 | 360 | | 3 | | 9 | 2 | 118 | 15 |
| 8 | 297 | 7 | 3 | 3 | 10 | 2 | 72 | 13 |
| 9 | 365 | 8 | 2 | 3 | 10 | 4 | 34 | 7 |
| 10 | 79 | 6 | 2 | | 10 | 2 | 60 | 16 |
| 11 | 43 | 5 | 2 | | 10 | 4 | 102 | 13 |
| 12 | 10 | 5 | 8 | | 10 | 11 | 104 | 12 |
| 13 | 12 | 3 | 9 | 6 | 12 | 9 | 213 | 14 |
| 14 | 14 | 5 | 10 | 6 | 10 | 40 | 210 | 10 |
| 15 | 13 | 5 | 8 | 7 | 10 | 23 | 599 | 8 |
| 16 | 12 | | | 8 | 7 | 41 | 365 | 17 |
| 17 | 14 | | 8 | 8 | | 59 | 274 | 12 |
| 18 | 15 | | 6 | 5 | | 52 | 338 | 6 |
| 19 | 15 | 3 | 5 | 5 | | 69 | 183 | 5 |
| 20 | 17 | 3 | 5 | 5 | 7 | 138 | 263 | 5 |
| 21 | 20 | 3 | 4 | 7 | 3 | 171 | 267 | 5 |
| 22 | 15 | 3 | 3 | 10 | 6 | 198 | 184 | 5 |
| 23 | 13 | 3 | 3 | | 6 | 201 | 278 | 5 |

FPN PARTICLES/CC IN SIZE RANGE ( .7<DIA<1.4) MICRONS

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 7 | | 38 | 18 | | 109 | |
| 1 | 6 | 6 | | | 19 | | 145 | |
| 2 | 7 | 6 | | | 22 | | 137 | |
| 3 | 7 | 7 | | | 22 | | 133 | |
| 4 | 7 | 5 | | | 17 | | 97 | |
| 5 | | 7 | | | 17 | | 151 | |
| 6 | | 9 | 4 | 21 | 21 | 67 | 224 | |
| 7 | 9 | 8 | 6 | 26 | 26 | 46 | 202 | |
| 8 | 10 | 12 | 12 | 12 | 20 | | 199 | 11 |
| 9 | 12 | 6 | 9 | 24 | 16 | | 62 | 135 |
| 10 | 12 | 7 | 11 | 61 | 27 | | 30 | 109 |
| 11 | 12 | 5 | 8 | 31 | 24 | | 28 | |
| 12 | 12 | | 10 | 28 | 26 | | | 31 |
| 13 | 10 | | 8 | 18 | 22 | | | 27 |
| 14 | 10 | | 8 | 18 | 21 | | | 18 |
| 15 | 9 | | 7 | 16 | 14 | | | 14 |
| 16 | | | 9 | 25 | 27 | | | 14 |
| 17 | 8 | | 11 | 27 | 26 | | | 13 |
| 18 | 8 | | 18 | 21 | 20 | 59 | | 11 |
| 19 | 7 | | 16 | 23 | 18 | | | 14 |
| 20 | 6 | | 29 | 18 | 20 | 58 | | 14 |
| 21 | 5 | | 24 | 17 | | 77 | | |
| 22 | 5 | | 37 | 23 | | 92 | | 26 |
| 23 | 6 | | 41 | 16 | | 110 | | 22 |

FPN PARTICLES/CC IN SIZE RANGE (.7<DIA<1.4) MICRONS

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 22 | 3087 | 3274 | 825 | 256 | 280 | 187 |
| 1 | 23 | 23 | 585 | 959 | 792 | 269 | 375 | 179 |
| 2 | 23 | 28 | 416 | 1799 | 785 | 316 | 408 | 133 |
| 3 | 24 | 33 | 380 | 3609 | 784 | 336 | 542 | 100 |
| 4 | 22 | 39 | 213 | | 766 | 358 | 563 | 149 |
| 5 | 21 | 42 | 134 | 584 | 758 | 346 | 590 | 181 |
| 6 | 21 | 39 | 106 | | 849 | 336 | 660 | 199 |
| 7 | 18 | 31 | 309 | | 835 | 349 | 648 | 177 |
| 8 | 19 | 56 | 269 | 698 | 831 | 436 | 646 | 0 |
| 9 | 18 | 62 | | | 412 | 449 | 283 | |
| 10 | 19 | 60 | 330 | | | 402 | 591 | |
| 11 | 21 | 61 | 541 | | | 736 | 248 | |
| 12 | 25 | 65 | 391 | 431 | | 2004 | 61 | |
| 13 | 26 | 69 | 511 | 2115 | 191 | 180 | 159 | |
| 14 | 19 | 73 | 661 | 568 | 77 | 172 | 171 | |
| 15 | 15 | | 434 | 609 | 54 | 175 | 165 | |
| 16 | 13 | 96 | 737 | 651 | 476 | 265 | 228 | |
| 17 | 15 | 106 | 511 | | 500 | 297 | 240 | |
| 18 | 15 | 123 | 2180 | 648 | 489 | 233 | 219 | |
| 19 | 16 | 131 | | 641 | 487 | 290 | 18 | |
| 20 | 19 | 1275 | | 675 | 340 | 345 | 25 | |
| 21 | 19 | 722 | | 668 | 258 | 338 | 90 | |
| 22 | 21 | 3391 | | 791 | 256 | 285 | 111 | |
| 23 | 22 | | 2942 | 811 | 245 | 224 | 168 | |

FPN PARTICLES/CC IN SIZE RANGE (1.4<DIA<3.0) MICRONS

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 25 | 19 | 93 | 143 | 62 |
| 1 | | | | 26 | 17 | 98 | 128 | 65 |
| 2 | | | | 24 | 16 | 109 | 141 | 62 |
| 3 | | | | 24 | 15 | 77 | 150 | 64 |
| 4 | | | | 23 | 12 | 72 | 138 | 88 |
| 5 | | | | 19 | 12 | 70 | 146 | 96 |
| 6 | | | | 22 | 12 | | 237 | 114 |
| 7 | | | | 29 | 13 | | | 106 |
| 8 | | | | 26 | 11 | | | 57 |
| 9 | | | | 35 | 13 | | | 53 |
| 10 | | | | | 12 | | 229 | 37 |
| 11 | | | | | 11 | 33 | 170 | 38 |
| 12 | | | | | 13 | 64 | 119 | 75 |
| 13 | | | | 25 | 23 | 76 | 95 | 73 |
| 14 | | | | 28 | 26 | 73 | 73 | 75 |
| 15 | | | | | 33 | 74 | 71 | 76 |
| 16 | | | | | 44 | 100 | 61 | 76 |
| 17 | | | | | 52 | 124 | 51 | 51 |
| 18 | | | | | | 155 | | 40 |
| 19 | | | | | | 119 | 66 | 43 |
| 20 | | | | 20 | 57 | 138 | 66 | 52 |
| 21 | | | | 26 | 63 | 173 | 60 | 46 |
| 22 | | | | 27 | 88 | 104 | 58 | 46 |
| 23 | | | 24 | 21 | 93 | 170 | 59 | 47 |

FPN PARTICLES/CC IN SIZE RANGE (1.4<DIA<3.0) MICRONS

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 55 | 13 | 14 | 43 | 18 | 126 | |
| 1 | 86 | 55 | 10 | 14 | 33 | 17 | 350 | |
| 2 | 113 | 54 | 15 | 14 | 32 | 18 | 248 | |
| 3 | 86 | 48 | 15 | 13 | 37 | 16 | 36 | |
| 4 | 180 | 40 | 15 | | 44 | 19 | 181 | |
| 5 | 167 | 31 | 14 | | 48 | 19 | 204 | |
| 6 | 162 | | 15 | | | 15 | 219 | |
| 7 | 154 | | 18 | | 40 | 21 | 138 | 67 |
| 8 | 522 | 44 | 20 | 14 | 47 | 18 | 149 | 53 |
| 9 | 621 | 52 | 14 | 15 | 40 | 20 | 151 | 55 |
| 10 | 107 | 43 | 14 | | 37 | 27 | 144 | 65 |
| 11 | 60 | 36 | 11 | | 35 | 31 | 144 | 63 |
| 12 | 56 | 27 | 43 | | 35 | 30 | 153 | 51 |
| 13 | 69 | 15 | 51 | 25 | 33 | 48 | 183 | 49 |
| 14 | 64 | 24 | 45 | 28 | 28 | 66 | 192 | 58 |
| 15 | 74 | 28 | 36 | 33 | 26 | 58 | 22 | 51 |
| 16 | 71 | | | 35 | 28 | 77 | 365 | 36 |
| 17 | 80 | | 37 | 34 | | 89 | 121 | 32 |
| 18 | 75 | | 35 | 24 | | 98 | 343 | 30 |
| 19 | 82 | 11 | 22 | 20 | | 136 | 370 | 21 |
| 20 | 90 | 13 | 22 | 20 | 26 | 183 | 352 | 21 |
| 21 | 104 | 18 | 18 | 24 | 25 | 239 | 305 | 22 |
| 22 | 81 | 18 | 16 | 24 | 22 | 292 | 231 | 21 |
| 23 | 73 | 14 | 15 | | 20 | 328 | 222 | 22 |

FPN PARTICLES/CC IN SIZE RANGE (1.4<DIA<3.0) MICRONS

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 23 | | 35 | 31 | | 116 | |
| 1 | 24 | 22 | | | 38 | | 117 | |
| 2 | 24 | 23 | | | 31 | | 129 | |
| 3 | 26 | 23 | | | 39 | | 133 | |
| 4 | 27 | 22 | | | 31 | | 165 | |
| 5 | | 22 | | | 35 | | 146 | |
| 6 | | 26 | 27 | 29 | 35 | 76 | 168 | |
| 7 | 31 | 21 | 25 | 30 | 37 | 58 | 190 | |
| 8 | 32 | 22 | 21 | 36 | 43 | | 214 | 8 |
| 9 | 31 | 17 | 21 | 33 | 30 | | 25 | 80 |
| 10 | 32 | 15 | 23 | 48 | 29 | | 20 | 70 |
| 11 | 34 | 13 | 13 | 49 | 29 | | 23 | |
| 12 | 33 | | 13 | 34 | 21 | | | 15 |
| 13 | 32 | | 13 | 33 | 28 | | | 16 |
| 14 | 33 | | 14 | 31 | 38 | | | 11 |
| 15 | 42 | | 15 | 33 | 33 | | | 10 |
| 16 | | | 19 | 27 | 34 | | | 9 |
| 17 | 41 | | 19 | 31 | 37 | | | 8 |
| 18 | 39 | | 31 | 30 | 24 | 58 | | 7 |
| 19 | 26 | | 32 | 29 | 33 | | | 9 |
| 20 | 22 | | 33 | 31 | 33 | 55 | | 9 |
| 21 | 19 | | 27 | 32 | | 60 | | |
| 22 | 18 | | 32 | 38 | | 72 | | 16 |
| 23 | 20 | | 42 | 31 | | 82 | | 14 |

AD-A088 229 NAVAL RESEARCH LAB WASHINGTON DC F/G 4/2
PASSIVE 19.3 GHZ RADIOMETER AND AEROSOL DATA FROM THE NORTH SEA--ETC(U)
AUG 80 S G GATHMAN, B G JULIAN
UNCLASSIFIED NRL-MR-4285 NL

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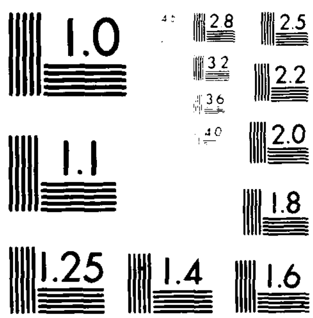


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

FPN PARTICLES/CC IN SIZE RANGE (1.4<DIA<3.0) MICRONS

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 16 | 2620 | 2662 | 2315 | 269 | 433 | 250 |
| 1 | 16 | 16 | 1176 | 2762 | 2222 | 288 | 709 | 252 |
| 2 | 15 | 19 | 621 | 2499 | 2445 | 371 | 1344 | 173 |
| 3 | 16 | 23 | 538 | 2782 | 2636 | 422 | 1510 | 132 |
| 4 | 15 | 28 | 238 | | 2396 | 518 | 1468 | 193 |
| 5 | 15 | 33 | 110 | 2438 | 2164 | 493 | 1593 | 214 |
| 6 | 16 | 31 | 87 | | 2496 | 490 | 2680 | 234 |
| 7 | 14 | 25 | 322 | | 2078 | 501 | 2440 | 196 |
| 8 | 15 | 40 | 1290 | 1287 | 1601 | 761 | 2387 | 0 |
| 9 | 14 | 45 | 944 | | 760 | 888 | 2798 | |
| 10 | 16 | 45 | 889 | | | 809 | 2130 | |
| 11 | 16 | 45 | 1497 | | | 1767 | 337 | |
| 12 | 18 | 49 | 1505 | 1466 | | 1958 | 60 | |
| 13 | 18 | 55 | 1245 | 2779 | 20 | 272 | 174 | |
| 14 | 14 | 59 | 1519 | 635 | 132 | 213 | 292 | |
| 15 | 12 | | 1624 | 794 | 100 | 243 | 326 | |
| 16 | 11 | 87 | 1903 | 965 | 543 | 534 | 549 | |
| 17 | 12 | 100 | 2271 | | 628 | 720 | 535 | |
| 18 | 12 | 117 | 2485 | 962 | 593 | 435 | 416 | |
| 19 | 12 | 129 | | 962 | 613 | 505 | 24 | |
| 20 | 14 | 1346 | | 1061 | 374 | 854 | 31 | |
| 21 | 14 | 1118 | | 1098 | 271 | 944 | 112 | |
| 22 | 17 | 1911 | 2445 | 1743 | 264 | 608 | 118 | |
| 23 | 17 | | 2667 | 1906 | 249 | 318 | 218 | |

FPN PARTICLES / CC IN SIZE RANGE (3.0<DIA<5.0) MICRONS

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 0.04 | 1.18 | 5.75 | 4.96 | 2.29 |
| 1 | | | | 0.03 | 1.01 | 6.18 | 5.34 | 2.72 |
| 2 | | | | 0.02 | 0.95 | 7.07 | 5.49 | 2.08 |
| 3 | | | | 0.02 | 1.08 | 3.73 | 6.12 | 1.74 |
| 4 | | | | 0.02 | 0.80 | 3.14 | 6.66 | 2.93 |
| 5 | | | | 0.01 | 0.79 | 2.64 | 7.59 | 2.15 |
| 6 | | | | 0.03 | 0.67 | | 12.68 | 3.33 |
| 7 | | | | 0.08 | 0.74 | | | 3.45 |
| 8 | | | | 0.05 | 0.42 | | | 1.30 |
| 9 | | | | 0.74 | 0.63 | | | 1.47 |
| 10 | | | | | 0.60 | | 9.31 | 0.95 |
| 11 | | | | | 0.54 | 0.58 | 4.08 | 0.71 |
| 12 | | | | | 0.66 | 2.28 | 3.38 | 1.77 |
| 13 | | | | 0.49 | 0.87 | 3.22 | 3.34 | 1.47 |
| 14 | | | | 0.92 | 0.55 | 3.32 | 0.80 | 1.72 |
| 15 | | | | | 0.72 | 2.96 | 0.61 | 1.81 |
| 16 | | | | | 1.37 | 5.54 | 0.55 | 1.82 |
| 17 | | | | | 2.38 | 6.80 | 0.52 | 0.21 |
| 18 | | | | | | 8.00 | | 0.18 |
| 19 | | | | | | 5.77 | 3.56 | 0.35 |
| 20 | | | | 0.76 | 3.19 | 5.69 | 3.38 | 1.35 |
| 21 | | | | 1.32 | 3.53 | 5.15 | 3.00 | 1.28 |
| 22 | | | | 1.67 | 4.28 | 4.49 | 2.27 | 1.21 |
| 23 | | | 0.03 | 1.19 | 4.97 | 5.12 | 2.18 | 0.90 |

FPN PARTICLES / CC IN SIZE RANGE (3.0<DIA<5.0) MICRONS

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.72 | 0.57 | 0.65 | 1.10 | 0.50 | 11.75 | |
| 1 | 1.85 | 0.72 | 0.43 | 0.61 | 1.36 | 0.44 | | |
| 2 | 1.29 | 1.52 | 0.60 | 0.47 | 0.88 | 0.45 | 9.27 | |
| 3 | 2.18 | 0.95 | 0.70 | 0.44 | 0.55 | 0.33 | 9.20 | |
| 4 | 0.35 | 0.54 | 0.64 | | 1.31 | 0.53 | 5.81 | |
| 5 | 0.31 | 0.32 | 0.58 | | 1.31 | 0.24 | 7.69 | |
| 6 | 0.25 | | 0.84 | | | 0.20 | 5.94 | |
| 7 | 11.42 | | 1.27 | | 1.45 | 0.47 | 5.53 | 2.84 |
| 8 | 4.78 | 2.13 | 1.46 | 0.43 | 1.58 | 0.59 | 4.80 | 2.45 |
| 9 | 3.83 | 1.93 | 0.79 | 0.50 | 1.24 | 0.65 | 4.90 | 2.81 |
| 10 | 3.36 | 2.03 | 0.77 | | 1.09 | 1.28 | 4.67 | 3.32 |
| 11 | 3.01 | 2.20 | 0.66 | | 0.99 | 1.73 | 4.89 | 3.58 |
| 12 | 2.29 | 0.93 | 1.43 | | 0.98 | 1.42 | 4.66 | 2.78 |
| 13 | 3.09 | 1.00 | 2.08 | 1.35 | 0.55 | 2.28 | 11.81 | 2.21 |
| 14 | 1.82 | 1.19 | 1.45 | 1.60 | 0.64 | 3.21 | 8.80 | 2.73 |
| 15 | 3.49 | 1.61 | 1.28 | 1.99 | 0.49 | 2.11 | 13.74 | 2.10 |
| 16 | 3.54 | | | 1.92 | 1.19 | 3.53 | 33.95 | 1.57 |
| 17 | 4.01 | | 1.49 | 1.85 | | 4.61 | 20.80 | 1.91 |
| 18 | 3.22 | | 1.61 | 1.01 | | 2.96 | 28.03 | 1.69 |
| 19 | 3.76 | 0.28 | 1.02 | 0.61 | | 3.94 | 9.97 | 0.68 |
| 20 | 4.92 | 0.54 | 1.04 | 0.82 | 0.87 | 4.88 | 15.62 | 0.78 |
| 21 | 6.60 | 0.86 | 1.00 | 1.59 | 0.72 | 4.86 | 10.76 | 0.74 |
| 22 | 3.27 | 0.81 | 0.95 | 1.09 | 0.64 | 5.42 | 11.55 | 0.70 |
| 23 | 2.64 | 0.61 | 0.76 | | 0.67 | 8.38 | 9.42 | 0.84 |

FPN PARTICLES / CC IN SIZE RANGE (3.0<DIA<5.0) MICRONS

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.77 | | 0.58 | 0.53 | | 1.11 | |
| 1 | 0.92 | 0.80 | | | 0.54 | | 1.04 | |
| 2 | 0.93 | 0.88 | | | 0.66 | | 0.92 | |
| 3 | 1.04 | 0.79 | | | 0.62 | | 1.02 | |
| 4 | 1.15 | 0.78 | | | 0.61 | | 0.92 | |
| 5 | | 0.72 | | | 0.62 | | 0.95 | |
| 6 | | 0.76 | 0.67 | 0.44 | 0.64 | 0.80 | 0.99 | |
| 7 | 1.09 | 0.69 | 0.69 | 0.61 | 0.68 | 0.56 | 1.01 | |
| 8 | 1.06 | 0.62 | 0.50 | 0.70 | 0.69 | | 1.06 | 0.01 |
| 9 | 0.94 | 0.55 | 0.60 | 0.48 | 0.49 | | 0.09 | 0.27 |
| 10 | 0.95 | 0.45 | 0.50 | 0.60 | 0.42 | | 0.14 | 0.13 |
| 11 | 1.13 | 0.37 | 0.45 | 0.65 | 0.45 | | 0.08 | |
| 12 | 1.08 | | 0.10 | 0.44 | 0.23 | | | 0.03 |
| 13 | 1.22 | | 0.13 | 0.45 | 0.21 | | | 0.03 |
| 14 | 1.43 | | 0.10 | 0.46 | 0.41 | | | 0.09 |
| 15 | 1.76 | | 0.18 | 0.26 | 0.23 | | | 0.09 |
| 16 | | | 0.16 | 0.40 | 0.36 | | | 0.07 |
| 17 | 1.49 | | 0.56 | 0.31 | 0.53 | | | 0.10 |
| 18 | 1.53 | | 0.51 | 0.43 | 0.43 | 0.68 | | 0.07 |
| 19 | 0.95 | | 0.41 | 0.50 | 0.58 | | | 0.08 |
| 20 | 0.83 | | 0.55 | 0.42 | 0.47 | 0.93 | | 0.09 |
| 21 | 0.71 | | 0.54 | 0.65 | | 1.05 | | |
| 22 | 0.70 | | 0.50 | 0.68 | | 1.15 | | 0.13 |
| 23 | 0.72 | | 0.69 | 0.57 | | 0.81 | | 0.11 |

FPN PARTICLES / CC IN SIZE RANGE (3.0<DIA<5.0) MICRONS

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.28 | 54.23 | 120.22 | 28.07 | 3.47 | 0.66 | 0.77 |
| 1 | 0.11 | 0.28 | 9.01 | 214.31 | 29.45 | 2.99 | 1.57 | 0.04 |
| 2 | 0.11 | 0.19 | 3.00 | 161.20 | 43.72 | 2.70 | 0.03 | 0.51 |
| 3 | 0.09 | 0.18 | 4.49 | 103.07 | 57.01 | 2.30 | 10.51 | 0.04 |
| 4 | 0.09 | 0.15 | 2.55 | | 42.12 | 3.50 | 9.01 | 0.55 |
| 5 | 0.09 | 0.13 | 1.72 | 65.33 | 31.13 | 3.21 | 11.61 | 0.44 |
| 6 | 0.10 | 0.16 | 2.08 | | 30.03 | 3.21 | 71.13 | 0.51 |
| 7 | 0.07 | 0.42 | 5.69 | | 20.00 | 2.01 | 44.01 | 0.58 |
| 8 | 0.06 | 0.06 | 148.43 | 3.94 | 7.96 | 5.51 | 39.20 | 0.00 |
| 9 | 0.07 | 0.07 | | | 3.07 | 11.39 | 95.69 | |
| 10 | 0.15 | 0.06 | 29.49 | | | 17.74 | 52.01 | |
| 11 | 0.11 | 0.07 | 172.37 | | | 275.04 | 3.32 | |
| 12 | 0.13 | 0.07 | 235.77 | 5.69 | | 453.29 | 0.22 | |
| 13 | 0.09 | 0.04 | 127.52 | 18.50 | 2.47 | 1.02 | 1.06 | |
| 14 | 0.09 | 0.05 | 167.59 | 2.08 | 1.43 | 6.02 | 0.22 | |
| 15 | 0.09 | | 160.51 | 3.14 | 1.40 | 5.15 | 0.26 | |
| 16 | 0.14 | 0.04 | 174.34 | 4.12 | 1.68 | 4.64 | 1.39 | |
| 17 | 0.16 | 0.03 | 209.45 | | 2.12 | 6.39 | 1.53 | |
| 18 | 0.23 | 0.03 | 381.46 | 4.09 | 2.52 | 4.56 | 0.73 | |
| 19 | 0.25 | 0.03 | | 3.58 | 2.59 | 4.05 | 1.06 | |
| 20 | 0.34 | 0.62 | | 3.39 | 2.12 | 5.58 | 0.95 | |
| 21 | 0.32 | 2.74 | | 2.08 | 2.04 | 3.32 | 1.61 | |
| 22 | 0.36 | 26.86 | | 11.09 | 1.90 | 1.02 | 0.66 | |
| 23 | 0.33 | | 139.45 | 12.88 | 2.63 | 0.22 | 0.55 | |

FPN PARTICLES / CC IN SIZE RANGE (5.0<DIA) MICRONS

| HOUR | 9/12/79 | 9/13/79 | 9/14/79 | 9/15/79 | 9/16/79 | 9/17/79 | 9/18/79 | 9/19/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 0.01 | 0.13 | 0.78 | 0.64 | 0.42 |
| 1 | | | | 0.00 | 0.09 | 0.92 | 0.86 | 0.56 |
| 2 | | | | 0.00 | 0.11 | 1.18 | 0.82 | 0.32 |
| 3 | | | | 0.00 | 0.15 | 0.46 | 1.04 | 0.19 |
| 4 | | | | 0.00 | 0.11 | 0.38 | 1.00 | 0.42 |
| 5 | | | | 0.00 | 0.11 | 0.22 | 1.20 | 0.13 |
| 6 | | | | 0.00 | 0.07 | | 2.61 | 0.64 |
| 7 | | | | 0.00 | 0.10 | | | 0.66 |
| 8 | | | | 0.00 | 0.03 | | | 0.05 |
| 9 | | | | 0.02 | 0.05 | | | 0.11 |
| 10 | | | | | 0.07 | | 0.95 | 0.08 |
| 11 | | | | | 0.07 | 0.03 | 0.15 | 0.02 |
| 12 | | | | | 0.09 | 0.19 | 0.25 | 0.09 |
| 13 | | | | 0.01 | 0.10 | 0.43 | 0.36 | 0.09 |
| 14 | | | | 0.04 | 0.02 | 0.58 | 0.01 | 0.15 |
| 15 | | | | | 0.04 | 0.40 | 0.01 | 0.18 |
| 16 | | | | | 0.07 | 1.08 | 0.01 | 0.18 |
| 17 | | | | | 0.22 | 1.25 | 0.01 | 0.00 |
| 18 | | | | | | 1.58 | | 0.00 |
| 19 | | | | | | 1.19 | 0.74 | 0.00 |
| 20 | | | | 0.04 | 0.42 | 0.04 | 0.77 | 0.12 |
| 21 | | | | 0.09 | 0.38 | 0.60 | 0.66 | 0.13 |
| 22 | | | | 0.13 | 0.34 | 0.93 | 0.41 | 0.12 |
| 23 | | | 0.00 | 0.09 | 0.53 | 0.55 | 0.38 | 0.07 |

FPN PARTICLES / CC IN SIZE RANGE (5.0<DIA) MICRONS

| HOUR | 9/20/79 | 9/21/79 | 9/22/79 | 9/23/79 | 9/24/79 | 9/25/79 | 9/26/79 | 9/27/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.03 | 0.08 | 0.09 | 0.28 | 0.05 | 2.62 | |
| 1 | 0.17 | 0.03 | 0.06 | 0.07 | 0.16 | 0.05 | | |
| 2 | 0.18 | 0.26 | 0.08 | 0.05 | 0.09 | 0.03 | 2.50 | |
| 3 | 0.62 | 0.09 | 0.08 | 0.04 | 0.04 | 0.03 | 1.71 | |
| 4 | 0.00 | 0.03 | 0.06 | | 0.12 | 0.04 | 0.87 | |
| 5 | 0.00 | 0.01 | 0.06 | | 0.10 | 0.01 | 1.11 | |
| 6 | 0.00 | | 0.20 | | | 0.01 | 1.27 | |
| 7 | 2.13 | | 0.23 | | 0.15 | 0.05 | 0.95 | 0.46 |
| 8 | 0.58 | 0.28 | 0.31 | 0.03 | 0.30 | 0.05 | 0.76 | 0.26 |
| 9 | 0.29 | 0.15 | 0.16 | 0.05 | 0.09 | 0.06 | 0.83 | 0.39 |
| 10 | 0.73 | 0.37 | 0.15 | | 0.10 | 0.12 | 0.72 | 0.46 |
| 11 | 0.84 | 0.36 | 0.14 | | 0.08 | 0.20 | 0.84 | 0.51 |
| 12 | 0.36 | 0.11 | 0.23 | | 0.08 | 0.21 | 0.82 | 0.32 |
| 13 | 0.49 | 0.29 | 0.34 | 0.23 | 0.04 | 0.22 | 5.73 | 0.22 |
| 14 | 0.17 | 0.26 | 0.19 | 0.25 | 0.06 | 0.41 | 2.62 | 0.42 |
| 15 | 0.56 | 0.30 | 0.19 | 0.36 | 0.04 | 0.21 | 6.39 | 0.29 |
| 16 | 0.70 | | | 0.36 | 0.12 | 0.38 | 6.19 | 0.33 |
| 17 | 0.81 | | 0.24 | 0.31 | | 0.46 | 5.73 | 0.27 |
| 18 | 0.51 | | 0.33 | 0.12 | | 0.34 | 4.35 | 0.24 |
| 19 | 0.56 | 0.02 | 0.13 | 0.04 | | 0.40 | 1.63 | 0.05 |
| 20 | 1.12 | 0.10 | 0.15 | 0.09 | 0.08 | 0.51 | 2.47 | 0.06 |
| 21 | 1.64 | 0.17 | 0.13 | 0.31 | 0.08 | 0.53 | 1.76 | 0.06 |
| 22 | 0.48 | 0.12 | 0.14 | 0.18 | 0.08 | 1.06 | 1.76 | 0.07 |
| 23 | 0.34 | 0.09 | 0.11 | | 0.05 | 1.13 | 1.65 | 0.08 |

FPN PARTICLES / CC IN SIZE RANGE (5.0<DIA) MICRONS

| HOUR | 9/28/79 | 9/29/79 | 9/30/79 | 10/1/79 | 10/2/79 | 10/3/79 | 10/4/79 | 10/5/79 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.07 | | 0.04 | 0.06 | | 0.15 | |
| 1 | 0.11 | 0.08 | | | 0.12 | | 0.14 | |
| 2 | 0.10 | 0.09 | | | 0.07 | | 0.09 | |
| 3 | 0.11 | 0.07 | | | 0.03 | | 0.13 | |
| 4 | 0.10 | 0.08 | | | 0.06 | | 0.11 | |
| 5 | | 0.07 | | | 0.09 | | 0.12 | |
| 6 | | 0.07 | 0.06 | 0.05 | 0.09 | 0.14 | 0.07 | |
| 7 | 0.10 | 0.08 | 0.07 | 0.04 | 0.10 | 0.09 | 0.14 | |
| 8 | 0.09 | 0.07 | 0.04 | 0.07 | 0.06 | | 0.19 | 0.00 |
| 9 | 0.09 | 0.05 | 0.05 | 0.05 | 0.05 | | 0.01 | 0.01 |
| 10 | 0.07 | 0.05 | 0.05 | 0.10 | 0.06 | | 0.01 | 0.00 |
| 11 | 0.10 | 0.04 | 0.04 | 0.06 | 0.05 | | 0.02 | |
| 12 | 0.11 | | 0.01 | 0.04 | 0.03 | | | 0.01 |
| 13 | 0.12 | | 0.00 | 0.02 | 0.03 | | | 0.01 |
| 14 | 0.15 | | 0.01 | 0.03 | 0.04 | | | 0.01 |
| 15 | 0.19 | | 0.00 | 0.01 | 0.03 | | | 0.01 |
| 16 | | | 0.00 | 0.03 | 0.05 | | | 0.01 |
| 17 | 0.13 | | 0.03 | 0.05 | 0.06 | | | 0.01 |
| 18 | 0.15 | | 0.04 | 0.05 | 0.05 | 0.10 | | 0.01 |
| 19 | 0.11 | | 0.06 | 0.06 | 0.08 | | | 0.02 |
| 20 | 0.07 | | 0.05 | 0.09 | 0.04 | 0.17 | | 0.01 |
| 21 | 0.07 | | 0.05 | 0.05 | | 0.15 | | |
| 22 | 0.05 | | 0.04 | 0.08 | | 0.15 | | 0.01 |
| 23 | 0.07 | | 0.03 | 0.06 | | 0.10 | | 0.01 |

FPN PARTICLES / CC IN SIZE RANGE (5.0<DIA) MICRONS

| HOUR | 10/6/79 | 10/7/79 | 10/8/79 | 10/9/79 | 10/10/9 | 10/11/9 | 10/12/9 | 10/13/9 |
|---|---|---|---|---|---|---|---|---|
| 0 | | 0.05 | 1.20 | 14.16 | 0.73 | 0.44 | 0.15 | 0.15 |
| 1 | 0.01 | 0.04 | 0.40 | 32.81 | 1.53 | 0.44 | 0.15 | 0.15 |
| 2 | 0.01 | 0.04 | 0.55 | 22.99 | 2.12 | 0.40 | 0.26 | 0.07 |
| 3 | 0.01 | 0.03 | 0.62 | 8.32 | 3.14 | 0.29 | 0.58 | 0.07 |
| 4 | 0.01 | 0.03 | 0.36 | | 2.74 | 0.44 | 0.69 | 0.07 |
| 5 | 0.00 | 0.02 | 0.18 | 1.61 | 2.15 | 0.40 | 0.77 | 0.07 |
| 6 | 0.01 | 0.03 | 0.26 | | 1.61 | 0.47 | 2.08 | 0.07 |
| 7 | 0.00 | 0.13 | 0.95 | | 1.13 | 0.40 | 1.75 | 0.07 |
| 8 | 0.01 | 0.01 | 54.16 | 0.22 | 0.55 | 0.80 | 1.61 | 0.00 |
| 9 | 0.01 | 0.01 | | | 0.15 | 2.66 | 7.88 | |
| 10 | 0.01 | 0.01 | 3.94 | | | 4.93 | 6.64 | |
| 11 | 0.01 | 0.01 | 40.07 | | | 89.01 | 1.24 | |
| 12 | 0.01 | 0.01 | 91.24 | 0.40 | | 218.25 | 0.00 | |
| 13 | 0.01 | 0.01 | 59.89 | 1.06 | 0.28 | 0.33 | 0.22 | |
| 14 | 0.02 | 0.01 | 77.96 | 0.15 | 0.16 | 1.61 | 0.00 | |
| 15 | 0.01 | | 98.07 | 0.33 | 0.15 | 1.35 | 0.00 | |
| 16 | 0.02 | 0.01 | 69.05 | 0.47 | 0.22 | 0.73 | 0.07 | |
| 17 | 0.03 | 0.00 | 64.16 | | 0.26 | 0.99 | 0.26 | |
| 18 | 0.04 | 0.01 | 110.88 | 0.44 | 0.26 | 0.69 | 0.11 | |
| 19 | 0.04 | 0.01 | | 0.29 | 0.29 | 0.62 | 0.33 | |
| 20 | 0.06 | 0.07 | | 0.26 | 0.29 | 0.55 | 0.15 | |
| 21 | 0.06 | 0.15 | | 0.04 | 0.26 | 0.07 | 0.36 | |
| 22 | 0.06 | 0.00 | | 0.29 | 0.22 | 0.00 | 0.11 | |
| 23 | 0.05 | | 19.16 | 0.33 | 0.44 | 0.04 | 0.11 | |

# 11. APPENDIX III — RADIOMETER DATA

RADIATION TEMPERATURE @19.3 GHZ (VERTICAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 91479 | 1600 | | | | | 176.8 | |
| 91479 | 2000 | | | | | 188.1 | |
| 91579 | 700 | | | | | 186.1 | |
| 91579 | 800 | | | | | 186.0 | |
| 91579 | 1000 | | | | | 186.0 | |
| 91579 | 1300 | | | | | 183.7 | |
| 91579 | 1600 | | | | | 183.5 | |
| 91579 | 2000 | | | | | 177.2 | |
| 91679 | 700 | | | | 176.1 | | |
| 91679 | 1000 | | | | 181.5 | 205.7 | 225.5 |
| 91679 | 1200 | | | 165.2 | | | |
| 91679 | 1500 | | | 164.8 | | | |
| 91679 | 1700 | | | 173.2 | 188.3 | | |
| 91679 | 2000 | | | | 187.2 | | |
| 91779 | 700 | | | | 207.9 | | |
| 91779 | 1000 | | | | 192.6 | | |
| 91779 | 1400 | | | | 184.8 | | |
| 91779 | 1600 | | | | 189.3 | | |
| 91779 | 2000 | | | | 184.9 | | |
| 91879 | 700 | | | | 192.6 | | |
| 91879 | 1000 | | | | 181.4 | | |
| 91879 | 1600 | | | | 183.9 | | |
| 91879 | 1800 | | | | 184.0 | | |
| 91979 | 700 | | | | 186.1 | | |
| 91979 | 900 | | | | 192.8 | | |
| 91979 | 1200 | | | | 189.3 | 211.0 | 237.1 |
| 92079 | 700 | | | | 193.7 | | |
| 92079 | 1200 | | | | 175.9 | | |
| 92079 | 1500 | | | | 184.1 | | |

RADIATION TEMPERATURE @19.3 GHZ (VERTICAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 92079 | 2100 | | | | 184.1 | | |
| 92179 | 800 | | | | 186.3 | | |
| 92179 | 1600 | | | | 181.7 | | |
| 92179 | 2000 | | | | 179.9 | | |
| 92279 | 700 | | | | 176.8 | | |
| 92279 | 800 | | | | 176.8 | | |
| 92279 | 1600 | | | | 182.8 | | |
| 92279 | 2000 | | | | 177.6 | | |
| 92379 | 800 | | | | 178.6 | | |
| 92379 | 1000 | | 134.6 | 164.7 | 179.8 | 204.6 | |
| 92379 | 1500 | | 134.6 | 166.9 | 185.2 | 207.8 | |
| 92379 | 2000 | | 173.4 | 182.0 | 194.9 | 214.3 | |
| 92479 | 700 | | 177.7 | 177.7 | 190.6 | 210.0 | |
| 92479 | 1000 | | | 163.6 | 180.8 | 203.4 | |
| 92479 | 1500 | | | | 168.9 | 204.0 | |
| 92479 | 2000 | | | 156.8 | 175.3 | 201.4 | |
| 92579 | 700 | | | 160.1 | 178.6 | 204.7 | |
| 92579 | 1200 | | 155.0 | 164.7 | 181.9 | 204.5 | |
| 92579 | 1500 | | 161.1 | 169.8 | 182.9 | 205.7 | |
| 92579 | 2000 | | | 174.2 | 187.2 | 209.0 | |
| 92679 | 700 | | | 171.1 | 187.2 | 208.8 | |
| 92679 | 1100 | | | 173.0 | 189.3 | 211.0 | |
| 92679 | 1500 | | | 173.9 | 189.3 | 212.4 | |
| 92679 | 2000 | | 165.4 | 177.4 | 193.7 | 214.4 | |
| 92779 | 700 | | | 174.3 | 189.4 | 208.8 | |
| 92779 | 1000 | | | 172.5 | 190.0 | 206.4 | |
| 92779 | 1500 | | | 162.5 | 178.9 | 201.9 | |
| 92779 | 2000 | | | 162.6 | 177.7 | 201.4 | |
| 92879 | 700 | | | 163.3 | 180.7 | 203.5 | |

## RADIATION TEMPERATURE @ 19.3 GHZ (VERTICAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 92879 | 1100 | | | 161.8 | 179.9 | 202.3 | |
| 92879 | 1200 | | | 160.3 | 177.6 | 201.2 | |
| 92879 | 1400 | | | 163.1 | 181.4 | 201.8 | |
| 92879 | 1600 | | | 164.1 | 181.5 | 205.4 | |
| 92879 | 2000 | | | 157.5 | 176.2 | 201.5 | |
| 92979 | 700 | | 151.8 | 161.5 | 178.7 | 202.4 | |
| 92979 | 1000 | | | 154.6 | 171.8 | 195.5 | 220.3 |
| 92979 | 1500 | | | 162.5 | 180.8 | 204.5 | 226.1 |
| 92979 | 2000 | | | 152.4 | 170.8 | 199.4 | 223.5 |
| 93079 | 700 | | 146.5 | 158.3 | 177.7 | 205.7 | 230.4 |
| 93079 | 1200 | | 146.9 | 160.0 | 179.5 | 207.8 | 233.9 |
| 93079 | 1600 | | 146.0 | | | | |
| 93079 | 2000 | | | 158.1 | 177.1 | 204.5 | 227.7 |
| 100179 | 700 | | | 165.6 | 179.3 | 203.5 | |
| 100179 | 1000 | | | 169.6 | 179.1 | 200.2 | |
| 100179 | 1500 | | | 164.4 | 178.5 | 201.4 | 219.9 |
| 100279 | 700 | | | | 176.6 | 200.3 | 216.4 |
| 100279 | 1000 | | | | 178.9 | 200.2 | 216.2 |
| 100279 | 1600 | | | 169.5 | 180.4 | 199.9 | 217.3 |
| 100279 | 2000 | | | | 185.3 | 200.2 | 216.2 |
| 100379 | 700 | | | 176.0 | 184.4 | 199.2 | 214.0 |
| 100379 | 1000 | | | | 182.0 | 199.2 | 216.4 |
| 100379 | 1800 | | | | 184.4 | 205.5 | 220.2 |
| 100379 | 2000 | | | | 184.4 | 205.5 | 226.6 |
| 100479 | 700 | | | | 187.4 | 215.2 | 234.3 |
| 100479 | 1000 | | | | 187.6 | 208.5 | |
| 100479 | 1800 | | | | 180.1 | 206.5 | 222.3 |
| 100579 | 700 | | | | 188.6 | 205.5 | 222.4 |
| 100579 | 1200 | | | | 205.5 | 211.8 | 226.6 |

RADIATION TEMPERATURE @ 19.3 GHZ (VERTICAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 100579 | 1600 | | | | 201.4 | 218.6 | 227.2 |
| 100579 | 2000 | | | | 190.7 | 209.7 | 225.6 |
| 100679 | 700 | | | | 187.6 | 206.6 | 222.4 |
| 100679 | 1200 | | | | 187.5 | 205.4 | 222.3 |
| 100679 | 1600 | | | | 187.4 | 207.4 | 224.3 |
| 100779 | 700 | | | | 187.5 | 209.7 | 230.8 |
| 100779 | 1100 | | | | 184.3 | 209.6 | 230.7 |
| 100779 | 1600 | | | | 210.7 | 227.6 | 246.2 |
| 100779 | 2100 | | | | 188.5 | 213.8 | 237.0 |
| 100879 | 700 | | | | 183.1 | 211.9 | 235.3 |
| 100879 | 1100 | | | | 184.1 | 209.9 | 233.6 |
| 100879 | 1400 | | | | | | 236.7 |
| 100879 | 1600 | | | 165.6 | 183.9 | 213.0 | 239.9 |
| 100879 | 2000 | | 149.6 | 162.5 | 179.7 | 206.6 | 229.2 |
| 100979 | 700 | | 155.0 | 166.8 | 184.0 | 209.9 | 229.2 |
| 100979 | 1000 | 151.9 | 160.5 | 171.2 | 188.5 | 214.3 | 232.6 |
| 100979 | 1600 | 148.7 | 156.4 | 171.8 | 189.4 | 215.7 | 237.7 |
| 100979 | 2100 | 151.7 | 159.3 | 173.3 | 190.5 | 217.4 | 240.0 |
| 101079 | 700 | 147.3 | | | | | |
| 101079 | 1600 | 148.0 | 155.1 | 169.3 | 186.7 | 212.8 | 235.6 |
| 101079 | 2100 | 148.1 | 155.7 | 168.7 | 187.2 | 213.3 | 235.1 |
| 101179 | 700 | | | | 188.2 | 213.2 | 231.7 |
| 101179 | 1800 | 145.4 | 154.2 | 169.5 | 188.2 | 216.8 | 243.2 |
| 101179 | 2200 | 148.9 | 157.7 | 169.8 | 189.5 | 219.2 | 243.4 |
| 101279 | 1200 | 147.9 | 154.4 | 167.5 | 186.0 | 213.1 | 238.2 |
| 101279 | 1800 | 145.2 | 152.9 | 167.2 | 185.9 | 215.6 | 243.1 |
| 101279 | 2200 | 148.0 | 152.4 | 164.3 | 182.8 | 206.7 | 228.5 |
| 101379 | 700 | 161.0 | | 162.1 | 180.6 | 212.1 | 241.5 |

RADIATION TEMPERATURE @ 19.3 GHZ (HORIZONTAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @28 DEG | RAD TEMP @38 DEG | RAD TEMP @48 DEG | RAD TEMP @58 DEG | RAD TEMP @68 DEG | RAD TEMP @78 DEG |
|---|---|---|---|---|---|---|---|
| 91479 | 1600 | | | | | 107.2 | |
| 91479 | 2000 | | | | | 123.9 | |
| 91579 | 700 | | | | | 126.9 | |
| 91579 | 1000 | | | | | 123.7 | |
| 91579 | 1300 | | | | | 127.8 | |
| 91579 | 1600 | | | | | 126.5 | |
| 91579 | 2000 | | | | | 116.2 | |
| 91679 | 700 | | | | 114.0 | | |
| 91679 | 1000 | | | | 123.3 | 117.0 | 114.8 |
| 91679 | 1200 | | | 133.8 | | | |
| 91679 | 1500 | | | 130.5 | | | |
| 91679 | 1700 | | | 137.6 | 133.4 | | |
| 91679 | 2000 | | | | 131.7 | | |
| 91779 | 700 | | | | 131.7 | | |
| 91779 | 1000 | | | | 133.8 | | |
| 91779 | 1400 | | | | 135.8 | | |
| 91779 | 1600 | | | | 133.8 | | |
| 91779 | 2000 | | | | 143.3 | | |
| 91879 | 700 | | | | 138.0 | | |
| 91879 | 1000 | | | | 133.7 | | |
| 91879 | 1600 | | | | 128.1 | | |
| 91879 | 1800 | | | | 122.2 | | |
| 91979 | 700 | | | | 126.3 | | |
| 91979 | 900 | | | | 138.2 | | |
| 91979 | 1200 | | | | 134.8 | 133.8 | 143.3 |
| 91979 | 2000 | | | | 119.0 | | |
| 92079 | 700 | | | | 144.9 | | |
| 92079 | 1200 | | | | 133.7 | | |
| 92079 | 1500 | | | | 125.2 | | |

RADIATION TEMPERATURE @ 19.3 GHZ (HORIZONTAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 92079 | 2000 | | | | 125.2 | | |
| 92179 | 800 | | | | 129.8 | | |
| 92179 | 1600 | | | | 127.0 | | |
| 92179 | 2000 | | | | 117.9 | | |
| 92279 | 700 | | | | 110.6 | | |
| 92279 | 800 | | | | 110.6 | | |
| 92279 | 1600 | | | | 115.8 | | |
| 92279 | 2000 | | | | 114.8 | | |
| 92379 | 800 | | | | 112.9 | | |
| 92379 | 1000 | | 138.1 | 127.6 | 118.2 | 109.8 | |
| 92379 | 1500 | | 138.1 | 131.8 | 125.5 | 119.1 | |
| 92379 | 2000 | | 159.9 | 145.1 | 139.9 | 140.9 | |
| 92479 | 700 | | 160.1 | 142.3 | 135.0 | 127.6 | |
| 92479 | 1000 | | | 126.8 | 139.4 | 111.0 | |
| 92479 | 1500 | | | | 114.6 | 110.6 | |
| 92479 | 2000 | | | 116.4 | 107.9 | 99.5 | |
| 92579 | 700 | | | 120.3 | 112.2 | 105.5 | |
| 92579 | 1200 | | 135.9 | 128.6 | 122.3 | 114.9 | |
| 92579 | 1500 | | 148.7 | 138.1 | 131.8 | 128.6 | |
| 92579 | 2000 | | | 142.7 | 138.4 | 134.2 | |
| 92679 | 700 | | | 137.2 | 132.0 | 128.9 | |
| 92679 | 1100 | | | 138.0 | 133.8 | 129.6 | |
| 92679 | 1500 | | | 143.8 | 136.4 | 133.6 | |
| 92679 | 2000 | | 159.2 | 144.4 | 142.3 | 136.0 | |
| 92779 | 700 | | | 134.9 | 130.7 | 125.4 | |
| 92779 | 1000 | | | 134.9 | 129.6 | 117.0 | |
| 92779 | 1500 | | | 123.4 | 116.1 | 107.6 | |
| 92779 | 2000 | | | 120.7 | 112.3 | 102.9 | |
| 92879 | 700 | | | 121.6 | 113.1 | 106.7 | |

## RADIATION TEMPERATURE @ 19.3 GHZ (HORIZONTAL POL) AT FPN

| DATE | TIME GMT | RAD TEMP @28 DEG | RAD TEMP @38 DEG | RAD TEMP @48 DEG | RAD TEMP @58 DEG | RAD TEMP @68 DEG | RAD TEMP @78 DEG |
|---|---|---|---|---|---|---|---|
| 92879 | 1100 | | | 122.6 | 115.3 | 106.9 | |
| 92879 | 1200 | | | 120.5 | 112.2 | 105.9 | |
| 92879 | 1400 | | | 125.8 | 117.4 | 110.1 | |
| 92879 | 1600 | | | 123.1 | 116.8 | 109.4 | |
| 92879 | 2000 | | | 117.1 | 110.8 | 103.4 | |
| 92979 | 700 | | 131.8 | 120.2 | 113.9 | 106.5 | |
| 92979 | 1000 | | | 124.8 | 118.5 | 112.2 | 104.9 |
| 92979 | 1600 | | | 124.8 | 117.4 | 110.1 | 103.8 |
| 92979 | 2000 | | | 111.6 | 103.9 | 94.0 | 89.6 |
| 93079 | 700 | | 123.4 | 115.0 | 106.5 | 99.1 | 94.9 |
| 93079 | 1100 | | 125.8 | 117.3 | 107.8 | 99.3 | 96.1 |
| 93079 | 2000 | | | 75.5 | 65.5 | 54.2 | |
| 100179 | 700 | | | 125.7 | 115.4 | 104.1 | |
| 100179 | 1000 | | | 136.4 | 120.2 | 110.0 | |
| 100179 | 1500 | | | 127.7 | 117.1 | 108.7 | 101.3 |
| 100279 | 800 | | | 126.6 | 119.4 | 110.2 | 103.0 |
| 100279 | 1000 | | | | 121.7 | 115.5 | 99.8 |
| 100279 | 1600 | | | 152.9 | 121.3 | 121.3 | 103.4 |
| 100279 | 2000 | | | | 130.3 | 116.1 | 105.9 |
| 100379 | 700 | | | 142.5 | 126.3 | 112.1 | 104.0 |
| 100379 | 1000 | | | 145.5 | 122.8 | 110.4 | 102.1 |
| 100379 | 1800 | | | | 123.5 | 115.2 | 109.0 |
| 100379 | 2000 | | | | 128.2 | 118.1 | 114.0 |
| 100479 | 700 | | | | 134.8 | 140.9 | 143.0 |
| 100479 | 1000 | | | | 126.5 | 122.4 | |
| 100479 | 1800 | | | | 127.6 | 123.5 | 119.4 |
| 100579 | 700 | | | | 150.6 | 146.6 | 144.5 |
| 100579 | 1200 | | | | 150.6 | 148.6 | 146.5 |
| 100579 | 1600 | | | | 151.7 | 149.7 | 155.9 |

RADIATION TEMPERATURE @ 19.3 GHZ (HORIZONTAL POL.) AT FPN

| DATE | TIME GMT | RAD TEMP @20 DEG | RAD TEMP @30 DEG | RAD TEMP @40 DEG | RAD TEMP @50 DEG | RAD TEMP @60 DEG | RAD TEMP @70 DEG |
|---|---|---|---|---|---|---|---|
| 100579 | 2100 | | | | 138.9 | 138.9 | 145.0 |
| 100679 | 700 | | | | 134.4 | 131.4 | 128.3 |
| 100679 | 1200 | | | | 130.2 | 126.2 | 122.1 |
| 100679 | 1600 | | | | 134.2 | 126.1 | 122.0 |
| 100779 | 700 | | | | 130.6 | 122.4 | 118.4 |
| 100779 | 1000 | | | | 124.4 | 120.3 | 116.2 |
| 100779 | 1600 | | | | 130.2 | 128.1 | 120.9 |
| 100779 | 2100 | | | | 129.5 | 127.5 | 128.5 |
| 100879 | 700 | | | | 123.1 | 118.0 | 118.0 |
| 100879 | 1100 | | | | 126.6 | 122.5 | 119.4 |
| 100879 | 1400 | | | | | | 120.6 |
| 100879 | 1600 | | 135.6 | 129.4 | 122.3 | 118.2 | 121.3 |
| 100879 | 2000 | | 133.6 | 126.5 | 121.3 | 115.2 | 114.2 |
| 100979 | 700 | | 137.1 | 129.9 | 123.7 | 120.6 | 118.5 |
| 100979 | 1000 | 146.1 | 146.1 | 141.9 | 134.6 | 129.4 | 126.3 |
| 100979 | 1600 | 147.3 | 143.2 | 140.0 | 137.9 | 134.8 | 133.8 |
| 100979 | 2100 | 150.0 | 145.9 | 139.8 | 136.7 | 134.7 | 137.8 |
| 101079 | 700 | 143.3 | | | | | |
| 101079 | 1600 | 144.0 | 139.8 | 133.4 | 127.1 | 122.9 | 125.0 |
| 101079 | 2100 | 145.0 | 140.9 | 135.6 | 134.6 | 130.4 | 132.5 |
| 101179 | 700 | | | | 157.4 | 134.5 | 129.2 |
| 101179 | 1800 | 143.6 | 138.3 | 153.1 | 127.7 | 126.7 | 132.0 |
| 101179 | 2200 | 148.3 | 144.2 | 136.9 | 133.7 | 136.9 | 136.9 |
| 101279 | 700 | 143.8 | 138.5 | 131.2 | 130.2 | 130.2 | 126.0 |
| 101279 | 1000 | 142.2 | 137.0 | 131.7 | 126.4 | 123.3 | 130.6 |
| 101279 | 2200 | 142.3 | 133.9 | 127.5 | 122.3 | 115.9 | 110.7 |
| 101379 | 700 | 134.8 | 129.6 | 122.2 | 116.9 | 112.7 | 118.0 |